APPENDIX A. ANALYSIS OF ENVIRONMENTAL IMPACT CATEGORIES

SECTION 1. BACKGROUND AND HOW TO USE THIS APPENDIX

1.1 This appendix summarizes the requirements and procedures to be used in environmental impact analysis according to resource impact category. Executive Orders, FAA and DOT Orders, and Memoranda & Guidance documents described in Appendix C may also contain requirements that apply.

1.2 The potential impact categories, presented in sections, are as follows:

1.3 To effectively use this appendix, first become familiar with the material contained in each impact area. Within each impact area, the overview box highlights major applicable Federal statute(s), regulations, executive orders, and guidance and the oversight agencies. Executive Order (E.O.) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, is addressed in this appendix in section 16 and in Appendix C. Since environmental justice is defined as any disproportionately high and adverse impact on minority populations and low-income populations, this E.O. applies to other impact categories where appropriate. Similarly, Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks, is addressed in this appendix in section 16 and applies to other impact categories where appropriate. Executive Order 13148 of April 21, 2000

"Greening the Government Through Leadership in Environmental Management" requires Federal agencies to use an EMS approach for improving environmental performance. Where EMS's have been implemented, they may assist in the evaluation of environmental impacts. In those cases, the NEPA and EMS processes should be complementary.

1.4 The information, however, should guide the responsible Federal Aviation Administration (FAA) official to appropriate resources and applicable requirements to be addressed as part of the National Environmental Policy Act (NEPA) process. To assist in this effort, the majority of the impact categories are divided into the following three discussion areas (paragraphs): Requirements; FAA Responsibilities, and Analysis of Significant Impacts. Following the discussion of FAA responsibilities, some impact categories will also have an additional discussion area, Significant Impact Thresholds, if quantitative thresholds have been established by the FAA or appropriate oversight agencies.

1.5 Should a proposed Federal action have a potential air quality impact, for example, review the Air Quality section of this appendix (section 2) to identify the legal references for air quality impacts. These requirements are summarized for ease of use; however, if further information is required, the statute, associated implementing regulations, and FAA policy should be reviewed with the staff of the Office of the Chief Counsel and/or regional counsel support and through coordination with appropriate Federal and State agency personnel.

1.6 Once the standards and relationship of the requirements to the project are understood, the thresholds for significant adverse effect should be reviewed. This section summarizes the impact threshold used by the FAA to determine significance of the effects of the proposed action where such thresholds have been established. For example, the FAA has issued guidance in determining the scope and context of potential noise impacts, and thus, whether noise increases are significant and require preparation of an EIS.

1.7 The final section, the analysis of impacts, provides guidance on the types and levels of evaluation when the impact is determined to be significant. It includes further information on consultations, studies, and identification of mitigation alternatives and monitoring actions.

1.8 Within each applicable impact category, alternative mitigation measures are identified.

SECTION 2. AIR QUALITY

Statute	Regulation	Oversight Agency
Clean Air Act (CAA), as amended [42 United States Code (U.S.C.) 7401-7671] [Public Law (PL) 91-604, PL 101-549]	Title 40 Code of Federal Regulations (CFR) parts 9, 50-53, 60, 61, 66, 67, 81, 82, and 93 (which includes General Conformity)	Environmental Protection Agency

2.1 Requirements.

2.1a. Two primary laws apply to air quality: NEPA, and the Clean Air Act (CAA). As a Federal agency, the FAA is required under NEPA to prepare an environmental document (e.g., environmental impact statement (EIS) or environmental assessment (EA)) for major Federal actions that have the potential to affect the quality including air quality of the human environment. An air quality assessment prepared for inclusion in a NEPA environmental document should include an analysis and conclusions of a proposed action's impacts on air quality.

2.1b. The CAA established National Ambient Air Quality Standards (NAAQS) for six pollutants, termed "criteria pollutants." The six pollutants are: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM-10 and PM-2.5), and sulfur dioxide (SO_2). The CAA requires each State to adopt a plan to achieve the NAAQS for each pollutant within timeframes established under the CAA. These air quality plans, known as State implementation plans (SIP), are subject to Environmental Protection Agency (EPA) approval. In default of an approved SIP, the EPA is required to promulgate a Federal implementation plan (FIP).

2.1c. When a NEPA analysis is needed, the proposed action's impact on air quality is assessed by evaluating the impact of the proposed action on the NAAQS. The proposed action's "build" and "no-build" emissions are inventoried for each reasonable alternative. The inventory should include both direct and indirect emissions that are reasonably foreseeable. Normally, further analysis would not be required for pollutants where emissions do not exceed general conformity thresholds. However, based on the nature of the project and consultation with State and local air quality agencies additional analysis may be deemed appropriate, such as that required for cumulative impacts. If there are any questions about whether additional analysis is reasonable, contact the appropriate headquarters office and the Office of Environment and Energy. If required, the emissions for the proposed action then are translated into pollutant concentrations using a dispersion model. Depending on the project, this step can be data and computation intensive. Once dispersion modeling has been performed, pollutant concentrations are combined with background pollutant concentrations and compared to the NAAQS. If modeled concentrations do not result in projected exceedances of the NAAQS, then the analysis is complete. If concentrations exceed the NAAQS, emissions must be mitigated or offset, or the action redesigned to reduce emissions.

2.1d. In addition to NEPA, General Conformity, and grant funding requirements, there may be State and local air quality requirements to consider. These requirements can include, but are not limited to, provisions such as State indirect source regulations and State air quality standards.

2.1e. Section 176(c) of the CAA, as amended in 1990, requires that Federal actions conform to the appropriate Federal or State air quality plans (FIP's or SIP's) in order to attain the CAA's air quality goals. Section 176(c) states:

> ″No department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity which does not conform to an implementation plan.″

2.1f. Conformity is defined as conformity to the implementation plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards, and that such Federal activities will not:

(1). Cause or contribute to any new violation of any standard in any area.

(2). Increase the frequency or severity of any existing violation of any standard in any area.

(3). Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

2.1g. The CAA 1990 Amendments required the EPA to issue rules that would ensure Federal actions conform to the appropriate FIP or SIP. A final rule for determining conformity of general Federal actions (40 CFR part 93, subpart B) was published in the *Federal Register* (FR) on November 30, 1993, and became effective January 31, 1994. In addition, 40 CFR part 51, subpart W specifies requirements for conformity which States must include in their respective SIP's. Once a SIP conformity provision has been approved by EPA, the State conformity requirements included in the SIP apply. EPA issued separate rules addressing conformity of highway, roadway, and transit plans and projects (40 CFR part 93, subpart A, and 40 CFR part 51, subpart T) on November 15, 1993. The remaining conformity discussion addresses only General Conformity since FAA actions are subject to this rule, although projects involving airport access may also be subject to some provisions of Transportation Conformity.

2.1h. The General Conformity Rule establishes the procedures and criteria for determining whether certain Federal actions conform to State or EPA (Federal) air quality implementation plans. To determine whether conformity requirements apply to a proposed Federal action, the following must be considered: the non-attainment or maintenance status of the area; type of pollutant or emissions; exemptions from conformity and presumptions to conform; the project's emission levels; and the regional significance of the project's emissions. FAA actions are subject to the General Conformity Rule. Projects involving airport access that fall under 23 U.S.C. or the Federal Transit Act may also be subject to some provisions of Transportation Conformity.

2.1i. General conformity requirements are distinct from NEPA requirements. For example, NEPA may require FAA to analyze several alternatives in detail. If a general conformity determination is required, only the proposed action must be addressed. General conformity, like other environmental requirements, should be integrated into the NEPA process as much as possible. For example, the draft conformity determination should be issued along with any required draft EIS for public comment. While for some decisions there may be valid reasons to address general conformity separately rather than concurrently, when conformity analysis provides information that is essential to a reasoned choice among alternatives then FAA must complete the conformity analysis and issue the final conformity determination prior to completion of a final EIS.

2.1j. The General Conformity Rule only applies in areas that EPA has designated non-attainment or maintenance. A non-attainment area is any geographic area of the U.S. that experiences a violation of one or more NAAQS. A maintenance area is any geographic area of the U.S. previously designated non-attainment for a criteria pollutant pursuant to the CAA Amendments of 1990 and subsequently re-designated to attainment.

2.1k. The rule covers direct and indirect emissions of criteria pollutants or their precursors from Federal actions that meet the following criteria:

(1) Reasonably foreseeable, and

(2) Can practicably be controlled and maintained by the Federal agency through continuing program responsibility.

2.1l. Certain Federal actions are exempt from the requirement of the General Conformity Rule because they result in no emissions or emissions are clearly below the rule's applicability emission threshold levels. These include, but are not limited to:

(1) Continuing and recurring activities such as permit renewals.

(2) Routine maintenance and repair activities.

(3) Routine installation and operation of aviation and maritime navigation aids.

(4) Administrative actions.

(5) Planning studies and provision of technical assistance.

(6) The routine, recurring transportation of materiel and personnel.

(7) Transfers of land, facilities, and real properties.

(8) Actions affecting an existing structure where future activities will be similar in scope to activities currently being conducted.

(9) Enforcement and inspection activities.

(10) Air traffic control activities and adopting approach, departure and en route procedures for air operations.

2.1m. The General Conformity Rule provides a provision that permits agencies to develop a list of actions presumed to conform which would be exempt from the requirements of the rule unless regionally significant (discussed below). Notification of such a list and the basis for the presumption of conformity will be published in the *Federal Register*.

2.1n. A conformity determination is not required if the emissions caused by the proposed Federal action are not reasonably foreseeable; if the emissions caused by the proposed Federal action cannot practicably be controlled and maintained by the Federal agency through its continuing program responsibility; if the action is listed as exempt or presumed to conform; or if the action is below the emission threshold (*de minimis*) levels. The emission threshold levels are defined in the General Conformity Rule. If a Federal action is not exempt or presumed to conform, the project's emissions must be analyzed with regard to conformity applicability emission levels. The rule established the threshold emission levels (annual threshold levels) to identify those actions with the potential to have significant air quality impacts. If the project's emissions are below annual threshold levels (*de minimis* levels) and are not regionally significant, then the requirements of the general conformity regulation do not apply to the Federal action or project (and therefore, a conformity determination is not required).

2.1o. In determining whether emission threshold levels are exceeded (and a conformity determination required), agencies must consider direct and indirect emissions. Direct emissions are those that are caused by or initiated by the Federal action and occur at the same time and place as the action. Indirect emissions are those caused by the Federal action, but occur later in time and/or may be removed in distance from the action. Temporary construction emissions must be considered in determining whether emission threshold levels are exceeded. (See EPA General Conformity Questions and Answers, dated November 1994.)

2.1p. In addition, the General Conformity Rule adopted the exclusive definition of indirect emissions, which excludes emissions that may be attributable to the Federal action, but that the FAA has no authority to control. The FAA is responsible for assessing only direct and indirect emissions of criteria pollutants and precursors that are caused by a Federal action, are reasonably foreseeable, and can practicably be controlled by the FAA through its continuing program responsibility. The FAA may compare emissions with and without the proposed Federal action during the year in which emissions are projected to be greatest in determining whether emission threshold levels are exceeded.

2.1q. If a Federal action does not exceed the threshold levels or is presumed to conform, it may still be subject to a general conformity determination if it has regional significance. If the

total of direct and indirect emissions of any pollutant from a Federal action represent 10 percent or more of a maintenance or non-attainment area's total emissions of that pollutant, the action is considered to be a regionally significant activity and conformity rules apply. Parts of the overall Federal action that are exempt from conformity requirements (e.g., emission sources covered by New Source Review) should not be included in the analysis. The purpose of the regionally significant requirement is to capture those Federal actions that fall below threshold levels, but have the potential to impact the air quality of a region.

2.1r. When it has been determined that a proposed Federal action is not exempt, presumed to conform, exceeds emission threshold levels, or is regionally significant, the agency must prepare a conformity determination based on analysis using criteria stated in EPA's General Conformity Rule (40 CFR part 93 (58 FR 63250, November 30, 1993)).

2.1s. A proposed action cannot be approved or initiated unless conformity does not apply or a positive conformity determination is issued (i.e., the action conforms to the SIP). If initial analysis does not indicate a positive conformity determination, alternative actions (including mitigation measures as part of the action) should be considered and further consultation, analysis, and documentation will be necessary.

2.2 FAA RESPONSIBILITIES.

2.2a. The FAA has a responsibility under NEPA to include in its EA or EIS sufficient analysis to disclose the potentially significant impact of a proposed action on the attainment and maintenance of air quality standards established by law or administrative determination.

2.2b. It is also the FAA's affirmative responsibility under section 176(c) of the CAA to assure that its actions conform to applicable SIP's. Before the FAA can fund or support in any way any activity, it must address the conformity of the action with the applicable SIP using the criteria and procedures prescribed in the General Conformity Rule or applicable SIP.

2.2c. In conducting air quality analysis for purposes of complying with NEPA or conformity, the FAA requires use of the Emissions and Dispersion Modeling System (EDMS) model for aviation sources (aircraft, auxiliary power units, and ground support equipment). The EPA accepted EDMS as a formal EPA preferred guideline model in 1993. An order form for the EDMS software and user's guide can be obtained from the EDMS Internet Site at http://www.aee.faa.gov/, or by writing the EDMS Program, Federal Aviation Administration, Office of Environment and Energy (AEE-300), 800 Independence Ave., S.W., Washington, D.C. 20591.

2.2d. If the proposed action either will not conform with the SIP or there is potential for the proposed action to cause the area to exceed the NAAQS, then further consultation, analysis, and documentation will be required in an EA or EIS and conformity determination document.

2.3 SIGNIFICANT IMPACT THRESHOLDS. Potentially significant air quality impacts associated with an FAA project or action would be demonstrated by the project or action exceeding one or more of the NAAQS for any of the time periods analyzed.

2.4 ANALYSIS OF SIGNIFICANT IMPACTS.

2.4a. When the analysis indicates potentially significant air quality impacts, it may be necessary to consult further with State or regional air quality officials and/or with EPA. It also is advisable to include such officials in the EIS scoping process to represent cooperating agencies with air quality expertise. These officials will help identify specific analyses needed, alternatives to be considered, or mitigation measures to be incorporated in the action.

2.4b. Air Quality Assessment Procedures**.** NEPA and the CAA Amendments of 1990 have separate requirements and processes; however, their steps can be integrated and combined for efficiency. Also, an air quality analysis can require the coordination of many different agencies. Such coordination and subsequent analysis takes time; therefore, air quality impacts should be addressed as early as practicable when preparing an EA or EIS. For more detailed guidance on air quality procedures see the FAA's report "Air Quality Procedures for Civilian Airports and Air Force Bases."

2.4c. Modeling Requirements**.** The EDMS is FAA's required methodology for performing air quality analysis modeling for aviation sources. EDMS also offers the capability to model other airport emission sources that are not aviation-specific, such as power plants, fuel storage tanks, and ground access vehicles.

2.4d. Except for air toxics or where advance written approval has been granted to use an equivalent methodology and computer model by the FAA Office of Environment and Energy, the air quality analyses for aviation emission sources from airport and FAA proposed projects conducted to satisfy NEPA, general conformity, and 49 USC 47106(c) requirements under the Clean Air Act Amendments of 1990 (as amended) must be prepared using the most recent EDMS model available at the start of the environmental analysis process. In the event that EDMS is updated after the environmental analysis process is underway, the updated version of EDMS may be used to provide additional disclosure concerning air quality but use is not required. A complete description of all inputs, particularly the specification of non-default data, should be included in the documentation of the air quality analysis. Users also must provide one copy of EDMS input files used in the analysis and the corresponding output files to the responsible FAA official on magnetic media specified by the FAA official.

2.4e. If air toxics analysis is performed, EDMS should be used or supplemented with other air toxic methodology and models in consultation with the appropriate FAA program office and AEE.

2.4f. Use of supplemental methodology and models for more refined analysis of non-aviation sources also is permitted in consultation with the appropriate FAA program office and AEE.

2.4g. All input data should be collected early in the environmental process and should reflect the latest available data. Assistance from the FAA Office of Environment and Energy is available on a case-by-case basis by request through the respective headquarters program office.

SECTION 3. COASTAL RESOURCES

Statute	Regulation	Oversight Agency
Coastal Barrier Resources Act of 1982 as amended by the Coastal Barrier Improvement Act of 1990 [16 U.S.C. 3501-3510] [PL 97-348]	U.S. Department of Interior Coastal Barrier Act Advisory Guidelines (57 FR 52730, November 5, 1992)	Fish and Wildlife Service Federal Emergency Management Agency
Coastal Zone Management Act as amended [16 U.S.C. 1451-1464] [PL 92-583]	15 CFR part 930, subparts C and D 15 CFR part 923	National Oceanic and Atmospheric Administration, Office of Coastal Zone Management Appropriate State CZM Agency
Executive Order 13089, Coral Reef Protection (63 FR 32701, June 16, 1998)		National Oceanic and Atmospheric Administration

3.1 REQUIREMENTS.

3.1a. Federal activities involving or affecting coastal resources are governed by the Coastal Barriers Resources Act (CBRA), the Coastal Zone Management Act (CZMA), and E.O. 13089, Coral Reef Protection. The CBRA prohibits, with some exceptions, Federal financial assistance for development within the Coastal Barrier Resources System that contains undeveloped coastal barriers along the Atlantic and Gulf coasts and Great Lakes. The CZMA and the National Oceanic and Atmospheric Administration (NOAA) implementing regulations (15 CFR part 930) provide procedures for ensuring that a proposed action is consistent with approved coastal zone management programs. E.O. 13089, Coral Reef Protection, requires Federal agencies to ensure that any actions that they authorize, fund, or carry out will not degrade the conditions of coral reef ecosystems.

3.1b. Permits/Certificates: Not applicable.

3.2 FAA RESPONSIBILITIES.

3.2a. CBRA**.** Maps specifically identifying lands included in the CBRA system are available from the Fish and Wildlife Service (FWS) office administering the CBRA program. If additional guidance on CBRA is needed, refer to the Department of Interior's (DOI) CBRA Advisory Guidelines (57 FR 52730, November 5, 1992). If the proposed action would occur on land within the CBRA system and involve funding for development, the action must receive an FWS exemption from the provisions of the CBRA. Results of consultation with FWS must be incorporated in the environmental document. Project-related impacts on coastal resource biotic resources and water quality may be described in the document's CBRA section, or in the sections of the document addressing these biotic and water quality issues.

3.2b. CZMA. When a proposed action affects (changes the manner of use or quality of land, water, or other coastal resources, or limits the range of their uses) the coastal zone in a State with an approved coastal zone management (CZM) program, the EA or EIS shall include the following:

(1) For Federally assisted activities or for other activities FAA itself undertakes, the views of the appropriate State or local agency as to the relationship of such activities with the approved State coastal zone management program, and the determination of the State as to whether the proposal is consistent with the approved State coastal zone management program.

(2) For issuance of a Federal license or permit, the applicant's certification that the proposed action complies with the State's approved Coastal Zone Management program and that such activity will be conducted in a manner consistent with the program, and the State's concurrence with the applicant's certification. (Approval of an airport layout plan approval could by definition be a Federal license or permitting action.) The State's concurrence may be presumed if the State does not act within six months after receipt of the applicant's certification, provided the State did not require additional information regarding that certification.

3.2c. E.O. 13089, Coral Reef Protection. Under this executive order, U.S. coral reef ecosystems are defined to mean those species, habitats, and other natural resources associated with coral reefs in all maritime areas and zones subject to the jurisdiction or control of the United States. When a proposed FAA action may affect U.S. coral reef ecosystems, the FAA shall, subject to the availability of appropriations, provide for implementation of measures needed to research, monitor, manage, and restore affected ecosystems, including, but not limited to measures reducing impacts from pollution, sedimentation, and fishing. To the extent consistent with statutory responsibilities and procedures, these measures shall be developed in cooperation with the U.S. Coral Reef Task Force and fishery management councils and in consultation with affected States, territorial, commonwealth, and local government agencies, Tribes, nongovernmental organizations, the scientific community, and commercial interests as part of the U.S. Coral Reef Initiative. Refer to the National Action Plan for Coral Reef Conservation and NOAA's Coral Reef Information System (CoRIS) for further information regarding significant impacts to coral reefs and marine protected areas.

3.2d. Other statutes, regulations, and executive orders may apply such as the Marine Protection, Research, and Sanctuaries Act of 1972, as amended (33 U.S.C. 1401, 1402, 1411-1421, 1441-1444, and 16 U.S.C. 1431-1434), the Abandoned Shipwreck Act of 1987 (43 U.S.C. 2101 et seq.).

3.3 SIGNIFICANT IMPACT THRESHOLDS. (No specific thresholds have been established)

3.4 ANALYSIS OF SIGNIFICANT IMPACTS.

3.4a. When a State having an approved CZM program raises an objection to the proposed action because the action would not be consistent with the applicable CZM plan, the FAA can

not approve the action, unless the objection is satisfied, or it is successfully appealed to the Secretary of Commerce. The process will be normally completed prior to a determination by the FAA of whether or not an EIS is needed for the action. Actions of concern include:

(1) The State agency objects to a FAA or sponsor consistency certification because the proposed action is inconsistent with the State's CZM Plan; or

(2) The FAA or sponsor does not successfully appeal the State agency's objection to the NOAA Assistant Administrator. In either of these cases, the FAA shall not approve such an action unless it includes State agency recommended changes that would make the proposed action consistent with the State's CZM Plan.

3.4b. If any issues remain that have not been resolved regarding the relationship of the action to an approved CZM program, such issues are identified in the scoping process and resolved in the EIS. In this situation, the State coastal zone management agency is invited to participate in the scoping process.

3.4c. For proposed actions determined to be inconsistent with the State's approved program and if the project cannot be modified so that it is consistent with the plan, the final EIS shall include a finding by the Secretary of Commerce that the proposed action is consistent with the purposes or objectives of the Coastal Zone Management Act or is necessary in the interest of national security. If a finding is not obtained from the Secretary of Commerce, the FAA cannot approve the proposed action.

3.4d. CBRA. Information regarding CBRA application and funding exceptions, including consultation with FWS, is sufficient for EIS purposes. Any significant impacts are reported under other appropriate impact categories.

3.4e. CZMA. CZM consistency applies only to States having an approved CZM plan. If an action would occur in a State not having an approved CZM plan, the FAA should consult (as necessary) with State and Federal agencies having jurisdiction over or expertise on the affected resources to determine if additional information is needed. Discuss impacts on these resources in sections of the environmental document prepared for those resources.

SECTION 4. COMPATIBLE LAND USE

Statute	Regulation	Oversight Agency
Aviation Safety and Noise Abatement Act of 1979, as amended (49 U.S.C. 47501-47507)	14 CFR part 150	Federal Aviation Administration

4.1 REQUIREMENTS.

4.1a. The compatibility of existing and planned land uses in the vicinity of an airport is usually associated with the extent of the airport's noise impacts. Airport development actions to accommodate fleet mix changes or the number of aircraft operations, air traffic changes, or new approaches made possible by new navigational aids are examples of activities that can alter aviation-related noise impacts and affect land uses subjected to those impacts. In this context, if the noise analysis described in the noise analysis section (section 14) concludes that there is no significant impact, a similar conclusion usually may be drawn with respect to compatible land use. However, if the proposal would result in other impacts exceeding thresholds of significance which have land use ramifications, for example, disruption of communities, relocation, and induced socioeconomic impacts, the effects on land use shall be analyzed in this context and described accordingly under the appropriate impact category with any necessary cross-references to the Compatible Land Use section to avoid duplication.

4.1b. For airport actions, the Compatible Land Use section of the environmental document shall include documentation to support the required airport sponsor's assurance under 49 USC 47107(a)(10), formerly section 511(a)(5) of the 1982 Airport Act, that appropriate action, including the adoption of zoning laws, has been or will be taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. The assurance must be related to existing and planned land uses.

4.1c. The Airport Development Grant Program (49 USC 47101 *et seq*.) requires that a project may not be approved unless the Secretary of Transportation is satisfied that the project is consistent with plans (existing at the time the project is approved) of public agencies for development of the area in which the airport is located (49 USC 47106(a)(1)).

4.1d. Permits/Certificates: Not applicable.

4.2 FAA RESPONSIBILITIES.

4.2a. Local land use determinations are reserved rights of local governments. However, FAA officials will contact the sponsor and representatives of affected communities to encourage the development of appropriate compatible land use measures early in the project planning stage. The environmental document shall address what is being done by the jurisdiction(s) with land

use control authority, including an update on any prior assurance. When local land use jurisdictions have adopted local noise standards that differ from FAA's significant noise threshold (see Section 14.3 of this appendix), FAA will disclose those local standards in its NEPA documentation.

4.2b. Table 1 (taken from Part 150) provides Federal compatible land use guidelines for several land uses as a function of DNL values. The ranges of DNL values in Table 1 reflect the statistical variability for the responses of large groups of people to noise. Any particular DNL level might not, therefore, accurately assess an individual's perception of an actual noise environment. Compatible or non-compatible land use is determined by comparing the predicted or measured DNL values at a site to the values listed in Table 1.

4.2c. **Noise Sensitive Area.** This is an area where noise interferes with normal activities associated with its use. Normally, noise sensitive areas include residential, educational, health, and religious structures and sites, and parks, recreational areas (including areas with wilderness characteristics), wildlife refuges, and cultural and historical sites. For example, in the context of noise from airplanes and helicopters, noise sensitive areas include such areas within the Day Night Level (DNL) 65 noise contour. Individual, isolated, residential structures may be considered compatible within the 65 DNL noise contour where the primary use of land is agricultural and adequate noise attenuation is provided. Also, transient residential use such as motels should be considered compatible within the 65 DNL noise contour where adequate noise attenuation is provided. A site that is unacceptable for outside use may be compatible for use inside of a structure, provided adequate noise attenuation features are built into that structure. (See table 1 on land use in this section; section 14 on noise in this appendix; and 14 CFR part 150, Airport Noise Planning, Land Use Compatibility Guidelines). The FAA recognizes that there are settings where the 65 DNL standard may not apply. In these areas, the responsible FAA official will determine the appropriate noise assessment criteria based on specific uses in that area. (See also section 6.2i of this appendix for further guidance.) In the context of launch vehicle operations, noise sensitive areas may include such sites within approximately 40 miles of the launch site for launches of very large rockets, whereas noise sensitive areas may include such sites within approximately 2 miles of the launch site for launches of small rockets. In the context of facilities and equipment, such as emergency generators or explosives firing ranges, but not including aircraft, noise sensitive areas may include such sites in the immediate vicinity of operations, pursuant to the Noise Control Act of 1972, (See State and local ordinances, which may be used as guidelines for evaluating noise impacts from operation of such facilities and equipment.)

TABLE 1—LAND USE COMPATIBILITY WITH YEARLY DAY-NIGHT AVERAGE SOUND

Land Use	Yearly day-night average sound level (L_{dn}) in decibels					
	< 65	65-70	70-75	75-80	80-85	> 85
Residential						
Residential, other than mobile homes and transient lodgings	Y	N (1)	N (1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N (1)	N (1)	N (1)	N	N
Public Use						
Schools	Y	N (1)	N (1)	N	N	N
Hospitals, nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Government services	Y	Y	25	30	N	N
Transportation	Y	Y	Y (2)	Y (3)	Y (4)	Y (4)
Parking	Y	Y	Y (2)	Y (3)	Y (4)	N
Commercial Use						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail- building materials, hardware and farm equipment	Y	Y	Y (2)	Y (3)	Y (4)	N
Retail trade-general	Y	Y	25	30	N	N
Utilities	Y	Y	Y (2)	Y (3)	Y (4)	N
Communication	Y	Y	25	30	N	N
Manufacturing and Production						
Manufacturing, general	Y	Y	Y (2)	Y (3)	Y (4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y (6)	Y (7)	Y (8)	Y (8)	Y (8)
Livestock farming and breeding	Y	Y (6)	Y (7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
Recreational						
Outdoor sports arenas and spectator sports	Y	Y (5)	Y (5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts, and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

Numbers in parenthesis refer to notes; see continuation of Table 1 for notes and key.

The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute Federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

(more)

TABLE 1—LAND USE COMPATIBILITY WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS (CONTINUED)

Key to Table 1	
Y (YES)	Land Use and related structures compatible without restrictions.
N (NO)	Land Use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30, or 35	Land use and related structures generally compatible; measures to achieve NLR of 25, 30 or 35 dB must be incorporated into design and construction of structure.
Notes for Table 1	
(1)	Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.
(2)	Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
(3)	Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
(4)	Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
(5)	Land use compatible provided special sound reinforcement systems are installed.
(6)	Residential buildings require an NLR of 25.
(7)	Residential buildings require an NLR of 30.
(8)	Residential buildings not permitted.
(end of Table 1)	

4.3 ANALYSIS OF SIGNIFICANT IMPACTS. When the noise analysis (see Noise, section 14) indicates that, pursuant to NEPA, a significant noise impact will occur over noise sensitive areas within the DNL 65 dB contour, the analysis should include a discussion of the noise impact on those areas. Any mitigation measures to be taken in addition to those associated with other land use controls shall be discussed. FAA Advisory Circular 150/5020-1, Noise Control and Compatibility Planning for Airports, presents guidance for airport operators and planners to help achieve compatibility between airports and their environs. Part 150 guidelines include traditional recreational uses that may be protected under section 4(f) of the DOT Act (recodified as 49 U.S.C. 303). Special consideration needs to be given to whether Part 150 land use categories are appropriate for evaluating noise impact on unique and sensitive section 4(f) properties. (See Department of Transportation Act, Section 4(f), in section 6 of this appendix). For example, Part 150 land use categories are not sufficient to determine the noise compatibility of areas within a national park or national wildlife refuge where other noise is very low and a quiet setting is a generally recognized purpose and attribute, or to address noise effects on wildlife. (See section 14.3, SIGNIFICANT IMPACT THRESHOLDS, of this appendix).

SECTION 5. CONSTRUCTION IMPACTS

Statute	Regulation	Oversight Agency
See requirements below		

5.1 REQUIREMENTS.

5.1a. Local, State, Tribal, or Federal ordinances and regulations address the impacts of construction activities, including construction noise, dust and noise from heavy equipment traffic, disposal of construction debris, and air and water pollution. Many of the specific types of impacts that could occur and permits or certificates that may be required are covered in the descriptions of other appropriate impact categories. Additionally, see the section on Hazardous Materials, Pollution Prevention, and Solid Waste the requirements under E.O. 12088, as amended, Federal Compliance with Pollution Control Standards, concerning compliance with foreign pollution control standards in the construction and operation of Federal facilities outside the United States.

5.1b. Permits/Certificates: Clean Water Act section 402 National Pollutant Discharge Elimination System (NPDES) permit (when construction disturbs 1 acre or more).

5.2 FAA RESPONSIBILITIES. The environmental document must include a general description of the type and nature of the construction and measures to be taken to minimize potential adverse effects. At a minimum, reference is made to the incorporation in project specifications of the provisions of Advisory Circular 150/5370-10A, Standards for Specifying Construction of Airports. Although this AC provides information to reduce airport-related construction impacts, that information may also be applicable to many construction activities FAA undertakes or authorizes.

5.3 SIGNIFICANT IMPACT THRESHOLDS. Construction impacts alone are rarely significant pursuant to NEPA. Refer to the air quality, water, fish, plants and wildlife, and other relevant impact categories for further guidance in assessing the significance of the potential construction impacts.

5.4 ANALYSIS OF SIGNIFICANT IMPACTS. In an unusual circumstance where a construction impact would create significant consequences that cannot be mitigated, a more thorough discussion is needed, including the results of consultations with those agencies that have concerns and the reasons why such impacts cannot be avoided or mitigated to insignificant levels. For example, in areas designated severe nonattainment for ozone, consider whether NOx emissions caused by construction equipment for major capital improvement projects would result in potentially significant air quality impacts.

SECTION 6. DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(f)

Statute	Regulation	Oversight Agency
Department of Transportation Act of 1966, section 4(f) [recodified at 49 U.S.C. 303 (c)]		Department of Transportation

6.1 REQUIREMENTS.

6.1a. The Federal statute that governs impacts in this category is commonly known as the Department of Transportation (DOT) Act, section 4(f) provisions. Section 4(f) of the DOT Act, which was recodified and renumbered as section 303(c) of 49 U.S.C., provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance or land from an historic site of national, State, or local significance as determined by the officials having jurisdiction thereof, unless there is no feasible and prudent alternative to the use of such land and such program, and the project includes all possible planning to minimize harm resulting from the use. This order continues to refer to section 4(f) because it would create needless confusion to do otherwise; the policies section 4(f) engendered are widely referred to as "section 4(f)" matters.

6.1b. Procedural requirements are set forth in Order DOT 5610.1C, Attachment 2, paragraph 4. The FAA also uses as guidance to the extent relevant the Federal Highway Administration and Urban Mass Transportation Administration's guidance defining *Constructive Use* under 23 CFR 771.135 (56 FR 13269, April 1, 1991).

6.1c. Designation of airspace for military flight operations is exempt from section 4(f). The Department of Defense reauthorization in 1997 provided that "[n]o military flight operations (including a military training flight), or designation of airspace for such an operation, may be treated as a transportation program or project for purposes of section 303(c) of title 49, United States Code"(PL 105-85, Nov. 18, 1997).

6.1d. Permits/Certificates: Not Applicable.

6.2 FAA RESPONSIBILITIES.

6.2a. Any part of a publicly owned park, recreation area, refuge, or historic site is presumed to be significant unless there is a statement of insignificance relative to the whole park by the Federal, State, or local official having jurisdiction thereof. Any such statement of insignificance is subject to review by the FAA**.**

6.2b. Where Federal lands are administered for multiple uses, the Federal official having jurisdiction over the lands shall determine whether the subject lands are in fact being used for

park, recreation, wildlife, waterfowl, or historic purposes. National wilderness areas may serve similar purposes and shall be considered subject to section 4(f) unless the controlling agency specifically determines that for section 4(f) purposes the lands are not being used.

6.2c. Where property is owned by and currently designated for use by a transportation agency and a park or recreation use of the land is being made only on an interim basis, a section 4(f) determination would not ordinarily be required. The FAA official or sponsor should indicate in any lease or agreement involving such use that this use is temporary.

6.2d. Where the use of a property is changed by a State or local agency from a section 4(f) type use to a transportation use in anticipation of a request for FAA approval, section 4(f) shall be considered to apply, even though the change in use may have taken place prior to the request for approval or prior to any FAA action on the matter. This is especially true where the change in use appears to have been undertaken in an effort to avoid the application of section 4(f).

6.2e. For section 4(f) properties, the initial assessment will determine whether the requirements of section 4(f) are applicable. When there is an actual physical taking of lands being used for park or other purposes in conjunction with a project, there is generally no latitude for judgment regarding 4(f) applicability. Use within the meaning of section 4(f) includes not only actual physical takings of such lands but also adverse indirect impacts (constructive use) as well. When there is no physical taking, but there is the possibility of constructive use, the FAA must determine if the impacts would substantially impair the 4(f) resource. If there would be no substantial impairment, the action would not constitute a constructive use and would not therefore invoke section 4(f) of the DOT Act. The responsible FAA official must consult all appropriate Federal, State, and local officials having jurisdiction over the affected section 4(f) resources when determining whether project-related noise impacts would substantially impair the resources. Following consultation, FAA is ultimately solely responsible for section 4(f) applicability and determinations.

6.2f. Substantial impairment occurs only when the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished. A project which respects a park's territorial integrity may still, by means of noise, air pollution, or otherwise, dissipate its aesthetic value, harm its wildlife, defoliate its vegetation, and take it in every practical sense. For section 4(f) purposes, the impairment must be substantial. With respect to aircraft noise, for example, the noise must be at levels high enough to have negative consequences of a substantial nature that amount to a taking of a park or portion of a park for transportation purposes

6.2g. The land use compatibility guidelines in 14 CFR Part 150 (Part 150) may be relied upon to determine whether there is a constructive use under section 4(f) where the land uses specified in the Part 150 guidelines are relevant to the value, significance, and enjoyment of the 4(f) lands in question. Part 150 guidelines may be relied upon in evaluating constructive use of lands devoted to traditional recreational activities. FAA may primarily rely upon the average day night sound levels (DNL) in Part 150 rather than single event noise analysis because DNL is the best measure of significant impact on the quality of the human environment, is the only noise

metric with a substantial body of scientific data on the reaction of people to noise, and has been systematically related to Federal compatible land use guidelines.

6.2h. Turning to historic sites, FAA may also rely upon Part 150 guidelines to evaluate impacts on historic properties that are in use as residences. Part 150 guidelines may not be sufficient to determine the noise impact on historic properties where a quiet setting is a generally recognized purpose and attribute, such as a historic village preserved specifically to convey the atmosphere of rural life in an earlier era or a traditional cultural property. If architecture is the relevant characteristics of an historic neighborhood, then project-related noise does not substantially impair the characteristics that led to eligibility for or listing on the National Register of Historic Places. As a result the noise does not constitute a constructive use and section 4(f) would not be triggered. A historic property would not be used for section 4(f) purposes when FAA issues a finding of No historic properties affected or No Adverse Effect under section 106 of the National Historic Preservation Act. Findings of Adverse Effects do not automatically trigger section 4(f) unless the effects substantially impair the affected resource's historical integrity. Although there may be some physical taking of land, Section 4(f) does not apply to archeological resources where the responsible FAA official, after consultation with the SHPO/THPO determines that the archeological resource is important chiefly for data recovery, and is not important for preservation in place. FAA is responsible for complying with section 106 of the National Historic Preservation Act (NHPA) (see section 11 of this appendix) regardless of the disposition of section 4(f).

6.2i. When assessing use of section 4(f) properties located in a quiet setting and the setting is a generally recognized feature or attribute of the site's significance, carefully evaluate reliance on part 150 guidelines. Additional factors must be weighed in determining whether to apply the thresholds listed in Part 150 guidelines to determine the significance of noise impacts on noise sensitive areas within national parks, national wildlife refuges, and historic sites including traditional cultural properties. The Part 150 land use compatibility table may be used as a guideline to determine significance of noise impacts on section 4(f) properties to the extent that the land uses specified bear relevance to the value, significance, and enjoyment of the lands in question. For example, part 150 guidelines may not be sufficient for all historic sites (see 6.2h above) and do not adequately address the effects of noise on the expectations and purposes of people visiting areas within a national park or national wildlife refuge where other noise is very low and a quiet setting is a generally recognized purpose and attribute.

6.2j. If FAA determines that section 4(f) is applicable and there are no prudent and feasible alternatives which would avoid such use, the effect on the section 4(f) land shall be described in detail. The description of the land shall include size, activities, patronage, access, unique or irreplaceable qualities, relationship to similarly used lands in the vicinity, or other factors necessary to determine the effects of the action and measures needed to minimize harm. Such measures may include the mitigation of project impacts or the replacement of land and facilities and design measures such as planting or screening to mitigate any adverse effects. Replacement satisfactory to the Secretary of the Interior (DOI) is specifically required for recreation lands aided by the DOI's Land and Water Conservation Fund and for certain other lands falling under the jurisdiction of the DOI. The environmental document shall include evidence of concurrence

or efforts to obtain concurrence of appropriate officials having jurisdiction over such land regarding actions proposed to minimize harm.

6.2k. If Federal grant money was used to acquire the land involved (e.g., open space under the Department of Housing and Urban Development (HUD) and various conservation programs under DOI) the environmental document shall include evidence of or reference to appropriate communication with the grantor agency.

6.3 SIGNIFICANT IMPACT THRESHOLDS. A significant impact would occur pursuant to NEPA when a proposed action either involves more than a minimal physical use of a section 4(f) property or is deemed a "constructive use" substantially impairing the 4(f) property, and mitigation measures do not eliminate or reduce the effects of the use below the threshold of significance (e.g., by replacement in kind of a neighborhood park). Substantial impairment would occur when impacts to section 4(f) lands are sufficiently serious that the value of the site in terms of its prior significance and enjoyment are substantially reduced or lost. If there is a physical or constructive use, FAA is responsible for complying with section 4(f) even if the impact is less than significant for NEPA purposes.

6.4 ANALYSIS OF SIGNIFICANT IMPACTS. The FAA shall consult with the officials having jurisdiction over the section 4(f) property(ies), and other agencies, as necessary. The EIS should thoroughly analyze and document prudent and feasible alternatives that would avoid the use of section 4(f) property and provide detailed measures to minimize harm.

SECTION 7. FARMLANDS

Statute	Regulation	Oversight Agency
Farmland Protection Policy Act [7 U.S.C. 4201-4209] [PL 97-98, amended by section 1255 of the Food Security Act of 1985, PL 99-198]	7 CFR part 658 (59 FR 31109, June 17, 1994) 7 CFR part 657 (43 FR 4030) CEQ Memorandum on Analysis of Impacts on Prime and Unique Agricultural Lands in Implementing the National Environmental Policy Act, August 11, 1980 (45 FR 59189, September 8, 1980)	USDA Natural Resource Conservation Service Council on Environmental Quality

7.1 REQUIREMENTS.

7.1a. The Farmland Protection Policy Act (FPPA) regulates Federal actions with the potential to convert farmland to non-agricultural uses.

7.1b. Permits/Certificates: Not Applicable.

7.2 FAA RESPONSIBILITIES.

7.2a. Consultation with the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) should occur to determine if the FPPA applies to the land the proposed action would convert to non-agricultural use, or if an exemption to the FPPA exists. If it is determined that the farmland is protected by the FPPA, formal coordination as provided by 7 CFR part 658 is required.

7.2b. The responsible FAA official should become aware of and make all reasonable attempts to consult with other Federal, State, and local officials who have responsibility over any adjacent, nearby, or potentially affected lands to assure compatibility of the proposed action and affected farmland.

7.2c. For FPPA-regulated farmland, scoring of the relative value of the site for preservation is performed by the NRCS and the proponent. If the total score on Form AD-1006 “Farmland Conversion Impact Rating” is below 160, no further analysis is necessary. Scores between 160 and 200 may have potential impacts and require further consideration of alternatives that would avoid this loss. Consider measures that reduce the amount of protected farmland that the project would convert or use farmland having relative lower value. If NRCS fails to respond within 45 days and if further delay would interfere with construction activities, the action may proceed as though the site were not farmland protected by the FPPA. The FAA then documents a "no response" by the NRCS in the environmental document.

7.2d. If there are unresolved land use issues with State and local officials, then further consultation will be required.

7.3 SIGNIFICANT IMPACT THRESHOLDS. A significant impact would occur pursuant to NEPA when the total combined score on Form AD 1006 (copies available from NRCS) ranges between 200 and 260 points. Note that impact severity increases as the total combined score approaches 260 points.

7.4 ANALYSIS OF SIGNIFICANT IMPACTS. The analysis evaluates the impacts on agricultural production in the area; compatibility with State, local and private programs and policies to protect farmland; any disruption of the farming community either as a direct result of the construction or by changes in land use associated with the action; and non-viability of farm support services in the area as a result of farmland conversion. Measures to minimize harm will be considered, including adjustments in the action to reduce the amount of farmland taken out of production or retain as much of the land as possible for agricultural use by incorporation into compatible land use plans.

SECTION 8. FISH, WILDLIFE, AND PLANTS

Statute and Other Guidance	Implementing Regulations and Other Guidance	Oversight Agency
Endangered Species Act of 1973 [16 U.S.C. §§1531-1544] [PL 93-205] Marine Mammal Protection Act of 1972 [16 U.S.C. §§1361-1421h] Related Essential Fish Habitat Requirements of the Magnuson-Stevens Act, as amended by the Sustainable Fisheries Act [16 U.S.C. §1855(b)(2)]	50 CFR parts 17 and 22 50 CFR part 402 50 CFR parts 450-453 50 CFR 600.920 MOU [among 14 Federal agencies] on Implementation of the Endangered Species Act, September 28, 1994 MOU on Using an Ecosystem Approach in Agency Decision-making, December 5, 1995 CEQ Guidance on Incorporating Biodiversity Considerations into Environmental Impact Analysis, January 1993	U.S. Department of the Interior, Fish and Wildlife Service U.S. Department of Commerce, National Marine Fisheries Service Council on Environmental Quality
Sikes Act Amendments of 1974 [PL 93-452]		State Natural Heritage Programs
Fish and Wildlife Coordination Act of 1958 [16 U.S.C. §§661-666c] [PL 85-624]		Fish and Wildlife Service
Fish and Wildlife Conservation Act of 1980 [16 U.S.C. §§2901-2912] [PL 96-366]	50 CFR part 83	Fish and Wildlife Service
Executive Order 13112, Invasive Species (64 FR 6183, February 8, 1999)	DOT Policy on Invasive Species, April 22, 1999	Departments of the Interior, Commerce, Agriculture, and Transportation
Migratory Bird Treaty Act of 1981 [16 U.S.C. §§703-712] Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds [66 FR 3853, January 17, 2001]	50 CFR Part 10	Department of the Interior
Presidential Memorandum on Environmentally and Economically Beneficial Landscape Practices on Federally Landscaped Grounds (April 26, 1994); Executive Order 13148, Greening the Government Through Leadership in Environmental Management (April 22, 2000).	Environmental Protection Agency, Office of the Federal Environmental Executive, Guidance for Presidential Memorandum on Environmentally and Economically Beneficial Landscape Practices on Federal Landscaped Grounds (60 FR 40837, August 10, 1995) Paragraph 3f of attachment 2; Order DOT 5610.1C	Environmental Protection Agency Office of the Federal Environmental Executive
The Animal Damage Control Act of 1931 [7 U.S.C. 426-426c] [46 stat. 1468]		U.S. Department of Agriculture; Animal and Plant Health Inspection Service; Wildlife Services

8.1 REQUIREMENTS.

8.1a. Section 7 of the Endangered Species Act (ESA), as amended, applies to Federal agency actions and sets forth requirements for consultation to determine if the proposed action "may affect" an endangered or threatened species. If an agency determines that an action "may affect" a threatened or endangered species, then Section 7(a)(2) requires each agency, generally the lead agency, to consult with the U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS), as appropriate, to ensure that any action the agency authorizes, funds, or carries out is not likely to jeopardize the continued existence of any Federally listed endangered or threatened species or result in the destruction or adverse modification of critical habitat. (The effects on fish, wildlife, and plants include the destruction or alteration of habitat and the disturbance or elimination of fish, wildlife, or plant populations.) If the Secretary of the Interior has developed a recovery plan for an affected species pursuant to section 4(f) of the ESA, that plan should be reviewed by FAA NEPA practitioners to ensure that assessments of impacts from FAA actions consider the management actions and criteria for measuring recovery identified in the plan. If a species has been proposed for Federal listing as threatened or endangered, or a critical habitat has been proposed, section 7(a)(4) states that each agency shall confer with the Services. Refer to the FWS and NMFS "Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act," March 1998. Section 9 prohibits a Federal agency from taking, without an incidental take permit, any endangered species. Where a conservation plan has been developed pursuant to a section 10 permit (incidental take permit), the FAA NEPA practitioner should ensure that the impact analysis contained in the NEPA document for the affected species is consistent with the predicted impacts described in the conservation plan. Under the Magnuson-Stevens Act, Federal agencies must consult with the NMFS with regard to any action authorized, funded, or undertaken that may adversely affect any essential fish habitat identified under the Act. The consultation procedures are generally similar to ESA consultation requirements.

8.1b. The Sikes Act and various amendments authorize States to prepare statewide wildlife conservation plans and the Department of Defense (DOD) to prepare similar plans for resources under its jurisdiction. Actions should be checked for consistency with the State Wildlife Conservation Plans and DOD plans where such plans exist.

8.1c. The Fish and Wildlife Coordination Act requires that agencies consult with the State wildlife agencies and the Department of the Interior (FWS) concerning the conservation of wildlife resources where the water of any stream or other water body is proposed to be controlled or modified by a Federal agency or any public or private agency operating under a Federal permit.

8.1d. The Fish and Wildlife Conservation Act provides for financial and technical assistance to States to develop conservation plans, subject to approval by the Department of the Interior, and implement State programs for fish and wildlife resources. The Fish and Wildlife Conservation Act also encourages all Federal departments and agencies to utilize their statutory

and administrative authority, to the maximum extent practicable and consistent with each agency's statutory responsibilities, to conserve and to promote conservation of non-game fish and wildlife and their habitats, in furtherance of the provisions of this Act.

8.1e. The Migratory Bird Treaty Act prohibits private parties (and federal agencies in certain judicial circuits from intentionally taking a migratory bird, their eggs, or nests. Take is defined as "pursue, hunt, shoot, wound, kill, trap, capture, or collect" (50 CFR §10.21). The MBTA prohibits taking, selling, or other activities that would harm migratory birds, their eggs or nests, unless the Secretary of the Interior authorizes such activities under a special permit. Contact U.S. Fish and Wildlife, as needed, regarding this issue. Information on this requirement is available at 50 CFR Part 21.

8.1f. Pursuant to Executive Order 13112, Invasive Species, of February 3, 1999, Federal agencies whose actions may affect the status of invasive species (alien species whose introduction does or is likely to cause economic or environmental harm to human health) are directed to use relevant programs and authorities, to the extent practicable and subject to available resources, to prevent the introduction of invasive species, and provide for restoration of native species and habitat conditions in ecosystems that have been invaded. Agencies are not to carry out actions that they believe are likely to cause or promote the introduction or spread of invasive species unless the benefits of such actions clearly outweigh the potential harm, and all feasible and prudent measures to minimize risk of harm should be taken in conjunction with the actions.

8.1g. The Presidential Memorandum on Economically and Environmentally Beneficial Landscaping encourages the use of native plants at Federal facilities and in federally funded landscaping projects. In addition, FAA Advisory Circular 150/5200-33, Hazardous Wildlife Attractants on or near Public Use Airports, recommends that a wildlife management biologist review landscaping plans for airports to minimize attracting hazardous wildlife (i.e., wildlife commonly associated with wildlife-aircraft strikes) to aircraft movement areas.

8.1h. Also, it is the policy of the FAA, consistent with NEPA and the CEQ regulations, to encourage the use of a systematic, interdisciplinary approach that integrates ecological, economic, and social factors during the decisionmaking process. The goals of this approach are to restore and maintain the health, sustainability (i.e., doing things today to protect tomorrow's environment), and biological diversity of ecosystems, while supporting sustainable economies and communities (i.e., economies and community activities that consider the environmental needs of succeeding generations). Actions should reflect sensitivity to regional ecological and economic needs and support FAA's mission to ensure aviation safety. An ecosystem approach emphasizes: (1) ensuring that all relevant and identifiable ecological and economic consequences, both long- and short-term, are considered; and (2) improving coordination among Federal agencies.

8.1i. In accordance with 40 CFR 1507.2(e), 1508.8(b) and 1508.27, the CEQ guidance on incorporating biodiversity considerations into environmental impact analyses under the National Environmental Policy Act requires Federal agencies to consider the effects of Federal actions on

biodiversity to the extent that is possible to both anticipate and evaluate those effects. The guidance outlines the general principles and discusses the importance of context -- that is, examining the indirect, direct, and cumulative impacts of a specific project in the regional or ecosystem context.

8.1j. In addition, the MOU on Using an Ecosystem Approach in Agency Decision-making requires FAA to participate, as appropriate to its mandates, in ecosystem management efforts initiated by other Federal agencies, by state or local governments, Tribes, or as a result of local grass-roots efforts. The ecosystem approach, consistent with the requirements in NEPA to use ecological information, emphasizes consideration of all relevant and identifiable ecological and economic consequences both long term and short term; coordination among Federal agencies; partnership; communication with the public; efficient and cost-effective implementation; use of best available science; improved data and information management, and responsiveness to changing circumstances.

8.1k. Permits/Certificates: Various wildlife statutes, such as the Marine Mammal Protection Act, require permits, or the Endangered Species Act requires issuance of a Biological Opinion, if an action may affect a Federally-protected species. An incidental take permit may be required with a no jeopardy/adverse modification biological opinion issued by FWS under the ESA.

8.2 FAA RESPONSIBILITIES.

8.2a. Coordination is to be initiated with the FWS or NMFS, as appropriate, pursuant to the ESA for Federally listed endangered, threatened, and candidate species or designated critical habitat, and, pursuant to the Fish and Wildlife Coordination Act where there is a potential impact on water resources with the Services as well as other Federal, State, and local agencies and Tribes having administration over fish, wildlife, and plant resources. FAA will integrate this coordination with the NEPA process to make these reviews more efficient and effective. For Federally listed, proposed, and candidate species and listed and proposed critical habitat, this initial step is known as initiation of consultation and triggers the ESA section 7(d) prohibition on irreversible or irretrievable commitment of resources.

8.2b. Letters will be obtained from these officials on the possible effects of the proposal on these resources and possible mitigation measures. The letters from the appropriate officials will provide an indication of the potential for substantial damage to water resources and harm to wildlife attributable to the proposal, if applicable.

8.2c. As appropriate, the responsible FAA official shall ensure that consultation and coordination with wildlife management specialists from the U.S. Department of Agriculture's Wildlife Service or other qualified wildlife biologists has occurred. These efforts shall focus on proposed activities, including mitigation efforts, to prevent creating wildlife-aircraft hazards or exacerbating existing ones. (Refer to Section 18.2 of this appendix of this order for further information.)

8.2d. Biological Assessments: A biological assessment (BA) is defined as information prepared by, or under the direction of, a Federal agency to determine whether a proposed action is likely to: (1) adversely affect listed species or designated critical habitat; (2) jeopardize the continued existence of species that are proposed for listing; or (3) adversely modify proposed critical habitat. BA's are mandatory for "major construction activities." (See 50 CFR 402.12(b).) BA's are not required to analyze alternatives to proposed actions. The recommended contents of a BA are found at 50 CFR 402.12(f). For other types of proposed actions, the Federal agency must provide the Services with the information the Federal agency used in evaluating the likely effects of the action. The FAA need not initiate formal consultation with the Services if, as a result of preparation of a BA, or as a result of informal consultation with the Services, the FAA determines that the proposed action is not likely to adversely affect any listed species or critical habitat (see 50 CFR 402.14).

8.2e. Informal consultation under ESA section 7: Informal consultation is a process that includes all discussions, correspondence, etc., between the Services and the FAA or its designated non-Federal representative. It is designed to assist Federal agencies in determining whether formal consultation or a conference is required. If, during formal consultation, it is determined by the FAA, with written concurrence of the Service, that a proposed action is not likely to adversely affect listed species or critical habitat, the consultation process is terminated and no further action is necessary. During informal consultation, the Service may suggest modifications to the proposed action that FAA could implement to avoid the likelihood of adverse effects to listed species or critical habitat.

8.2f. Formal consultation under ESA section 7(a)(2): For Federally listed threatened and endangered species and Federally designated critical habitat, formal consultation with FWS or NMFS under section 7(a)(2) of the ESA is triggered when: (1) the FAA determines that the proposed action "may affect" Federally listed species or designated critical habitat, unless the FWS or NMFS concur in writing that the proposed action is not likely to adversely affect any listed species or critical habitat, or (2) the FWS or NMFS does not concur with the agency's determination that the proposed action is not likely to adversely affect Federally listed species or designated critical habitat. Formal consultation is concluded when FWS or NMFS issues a Biological Opinion, which will either be a No Jeopardy/Adverse Modification Opinion, including an incidental take statement), or a Jeopardy/Adverse Modification Opinion.

8.2g. Biological Opinion: If a Biological Opinion states that the proposed action is not likely to jeopardize the continued existence of Federally listed threatened or endangered species in the affected area or results in the destruction or adverse modification of Federally designated critical habitat in the affected area, it is a No Jeopardy/Adverse Modification Opinion. An incidental take statement included in this opinion may provide one or more reasonable and prudent measures, with associated terms and conditions, to minimize the level of incidental take. If a Biological Opinion determines that the proposed action is likely to jeopardize the species or adversely modify critical habitat (a Jeopardy/Adverse Modification Opinion), it will include nondiscretionary reasonable and prudent alternatives. Formal consultation may be reinitiated when the amount or extent of incidental take is exceeded; new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously

considered; the action is modified in a manner causing effects to listed species or critical habitat not previously considered; or a new species is listed or critical habitat is designated that may be affected by the action.) (See 50 CFR 402.14 for further guidance on formal consultation.)

8.2h. Conference under ESA section 7(a)(4): The conference process is designed to assist in identifying and resolving any potential conflicts with proposed species early in the planning process. If the proposed action is likely to adversely affect Federally proposed species or critical habitat, then conference is required for Federally proposed species and Federally proposed critical habitat. If a proposed action will affect both listed and proposed species (or both designated and proposed critical habitat), the conference can be incorporated into the formal consultation process. Conference can be useful in later expediting the consultation process when a proposed species is listed or proposed critical habitat is designated. The FWS or NMFS may offer conservation recommendations during consultations, which describe suggested discretionary conservation actions (see 50 CFR 402.02 and 402.14(j)).

8.2i. Other statutes: Other statutes, such as the Marine Mammal Protection Act, may also apply depending upon the circumstances.

8.2j. For species not Federally listed as threatened or endangered and habitats not Federally designated as critical under the ESA:

(1) The FWS, NMFS, or other Federal or State agency or Tribe responsible for protecting wildlife where there is an impact on a water resource indicate that the impacted area is human-dominated, or the impact is transient in nature, or the alteration would not result in a long-term or permanent loss of wildlife or water resources.

(2) If, after these efforts, significant impacts are unavoidable, then the responsible FAA official conducts further consultation and analysis with the Services and other Federal, State, Tribal, or local officials in the preparation of the EIS.

8.3 SIGNIFICANT IMPACT THRESHOLDS. A significant impact to Federally-listed threatened and endangered species would occur when the FWS or NMFS determines that the proposed action would be likely to jeopardize the continued existence of the species in question, or would result in the destruction or adverse modification of Federally-designated critical habitat in the affected area. The involvement of Federally listed threatened or endangered species and the possibility of impacts as potentially serious as extinction or extirpation, or destruction or adverse modification of designated critical habitat, are factors weighing in favor of a finding of significance. However, an action need not involve a threat of extinction to Federally listed species to meet the NEPA standard of significance. Lesser impacts including impacts on non-listed species could also constitute a significant impact. In consultation with agencies and organizations having jurisdiction or special expertise concerning the protection and/or management of the affected species, NEPA practitioners should consider factors affecting population dynamics and sustainability for the affected species such as reproductive success rates, natural mortality rates, non-natural mortality (e.g., road kills and hunting), and the minimum population levels required for population maintenance. Relevant information may be

obtained from State and local wildlife management agencies and the scientific literature concerning wildlife management (e.g., USDA National Wildlife Research Center library).

8.4 ANALYSIS OF SIGNIFICANT IMPACTS.

8.4a. General. The FAA will, using the NEPA process for efficiency, coordinate with the Services, other Federal, State, or local wildlife agencies, Tribes, and others as necessary to assess the potential impacts. If the proposed action affects water resources and thereby triggers the Fish and Wildlife Coordination Act, then the FAA considers the recommendations of the FWS, NMFS, other Federal agencies, and the State or Tribal wildlife agency and assures that further detailed analysis is performed. This may include:

(1) Use of aerial photographs and field reconnaissance.

(2) Determining the significance of impacted habitats including the importance and range of fauna and flora and the location of nesting and breeding areas.

(3) A more detailed analysis of other impact areas (e.g., noise, air quality, water quality).

8.4b. Federally listed threatened and endangered species and Federally designated critical habitat. For Federally listed threatened and endangered species and Federally designated critical habitats, the FAA forwards to the Services the BA as required for major construction activities or supporting information as needed for other types of proposed actions with a request to initiate formal consultation under section 7(a)(2) of the ESA. The BA may be incorporated by reference or included in an EA. If the FAA accepts an alternative proposed by the FWS or the NMFS or proposes another acceptable alternative, the FAA also may conclude that impacts are not significant. If neither of the above apply, the potential impact is considered significant (see section 8.3 for other factors to consider when determining the significance of effects on affected species). In scoping the preparation of an EIS, the FAA requests the Services to be cooperating agencies on the basis of their jurisdiction. Further detailed analysis may consider:

(1) Further mitigation measures or action modifications.

(2) Further biological assessment.

(3) If the FWS or NMFS issues a Jeopardy/Adverse Modification Opinion, FAA may not proceed with the action unless the project is modified sufficiently to enable the Services to issue a No Jeopardy/Adverse Modification Opinion, or the action is exempted under 50 CFR part 451.

SECTION 9. FLOODPLAINS

Statute	Regulation	Oversight Agency
Executive Order 11988, Floodplain Management, May 24, 1977 (42 FR 26951) Appropriate State and local construction statutes	Order DOT 5650.2, Floodplain Management and Protection Federal Emergency Management Agency "Protecting Floodplain Resources: A Guidebook for Communities," 1996	Federal Aviation Administration Federal Emergency Management Agency Appropriate State and local agencies

9.1 REQUIREMENTS. Executive Order 11988 directs Federal agencies to take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health, and welfare, and restore and preserve the natural and beneficial values served by floodplains. Order DOT 5650.2 contains DOT's policies and procedures for implementing the executive order. Agencies are required to make a finding that there is no practicable alternative before taking action that would encroach on a base floodplain based on a 100-year flood (7 CFR 650.25).

9.2 FAA RESPONSIBILITIES.

9.2a. The responsible FAA official will consult with State and local officials to determine the boundaries of floodplains near the site of the action. The Federal Emergency Management Agency (FEMA) maps are the primary reference for determining the extent of the base floodplain. If a floodplain designation is in question, FEMA or the Army Corps of Engineers will be contacted for information.

9.2b. If the proposed action and reasonable alternatives are not within the limits of, or if applicable, the buffers of a base floodplain, a statement to that effect should be made. No further analysis is needed.

9.2c. If the agency finds that the only practicable alternative requires siting in the base floodplain, a floodplain encroachment would occur and further environmental analysis is needed. The FAA shall, prior to taking the action, design or modify the proposed action to minimize potential harm to or within the base floodplain. The action is to be consistent with regulations issued according to section 2(d) of E.O. 11988. The FAA shall also provide the public with an opportunity to review the encroachment through its public involvement process and any public notices, notices of opportunity for public hearing, public hearing notices, and notices of environmental document availability must state that an encroachment is anticipated.

9.2d. A floodplain finding is required in cases of significant encroachment. This finding confirms that there is no practicable alternative to placing the project in the floodplain and that

all measures to minimize harm will be included in the project. (see sec. 2a of E.O. 11988, Floodplain Management; dated May 24, 1977 [42 FR 26951])

9.2e. When property in floodplains is proposed for lease, easement, right-of-way, or disposal to non-Federal public or private parties, the FAA shall (1) reference in the conveyance those uses that are restricted under identified Federal, State, or local floodplain regulations; and (2) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successors , except where prohibited by law; or (3) withhold such properties from conveyance.

9.2f. FAA's analysis shall also indicate if the encroachment would be a "significant encroachment," that is, whether it would cause one or more of the following impacts:

(1) The action would have a high probability of loss of human life.

(2) The action would likely have substantial, encroachment-associated costs or damage, including interrupting aircraft service or loss of a vital transportation facility (e.g., flooding of a runway or taxiway; important navigational aid out of service due to flooding, etc.); or

(3) The action would cause adverse impacts on natural and beneficial floodplain values.

9.2g. If one or more of the alternatives under consideration includes significant floodplain encroachments, then any public notices, notices of opportunity for public hearing, public hearing notices, and notices of environmental document availability, shall note that fact.

9.2h. When flood storage is displaced, the analysis should consider compensatory floodwater storage impacts on upstream property, or how that storage could affect aquatic or other biotic systems. Development project not causing higher flood elevations or altering flood storage could adversely affect beneficial or natural floodplain values.

9.2i. Actions outside a base floodplain may adversely affect natural and beneficial floodplain resources. Consider impacts on natural and beneficial floodplain values, water pollution, increased runoff from impermeable surfaces, changes in hydrologic patterns, or induced secondary development. Mitigation to minimize such impacts is needed to comply with the applicable regulations. This mitigation may include: committing to comply with special flood-related design criteria; elevating facilities above the base flood elevation; or minimizing fill placed in floodplains.

9.3 SIGNIFICANT IMPACT THRESHOLDS. Floodplain impacts would be significant pursuant to NEPA if it results in notable adverse impacts on natural and beneficial floodplain values. Mitigation measures for base floodplain encroachments may include committing to special flood related design criteria, elevating facilities above base flood level, locating nonconforming structures and facilities out of the floodplain, or minimizing fill placed in floodplains.

9.4 ANALYSIS OF SIGNIFICANT IMPACTS.

9.4a. When the FAA prepares an EIS addressing significant impacts in this category, Federal, State, or local agencies with floodplain jurisdiction and expertise may become cooperating agencies. Further analysis includes the following as applicable to the action:

(1) Further consideration of the practicability of any alternatives.

(2) Inclusion of all practicable measures in the design of the proposal to minimize harm and to restore and preserve the natural and beneficial floodplain values affected. Commitments to later compliance with special flood related design criteria or the imposition, in advance, of protective conditions may be warranted in some situations.

(3) Evidence that the action conforms to applicable State and local floodplain protection standards.

SECTION 10. HAZARDOUS MATERIALS, POLLUTION PREVENTION, AND SOLID WASTE

Statute	Regulation	Oversight Agency
Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (as amended by the Superfund Amendments and Reauthorization Act of 1986 and the Community Environmental Response Facilitation Act of 1992) [42 U.S.C. 9601-9675]	40 CFR parts 300, 311, 355, and 370	Environmental Protection Agency
Pollution Prevention Act of 1990 [42 U.S.C. 1310-1319]	CEQ Memorandum on Pollution Prevention and the National Environmental Policy Act, January 12, 1993 (58 FR 6478)	Council on Environmental Quality Environmental Protection Agency
Toxic Substances Control Act of 1976, as amended (TSCA) [15 U.S.C. 2601-2692] [PL 94-469]	40 CFR parts 761 and 763	Environmental Protection Agency
Resource Conservation and Recovery Act of 1976 (RCRA) [PL 94-580, as amended by the Solid Waste Disposal Act of 1980 (SWDA), PL 96-482, the Hazardous and Solid Waste Amendments of 1984, PL 98-616, and the Federal Facility Compliance Act of 1992, (FFCA) PL 103-386] [42 U.S.C. 6901-6992(k)]	40 CFR parts 240-280	Environmental Protection Agency
Executive Order 12088, Federal Compliance with Pollution Control Standards, October 13, 1978 (43 FR 47707), amended by Executive Order 12580, January 23, 1987 (52 FR 2923) January 29, 1987		Environmental Protection Agency
Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements (58 FR 41981, August 3, 1993)		Environmental Protection Agency
Executive Order 12580, Superfund Implementation, amended by Executive Order 13016 and 12777		

10.1 REQUIREMENTS.

10.1a. Four primary laws have been passed governing the handling and disposal of hazardous materials, chemicals, substances, and wastes. The two statutes of most importance to the FAA in proposing actions to construct and operate facilities and navigational aids are the Resource Conservation and Recovery Act (RCRA) (as amended by the Federal Facilities Compliance Act of 1992) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA or Superfund) and the Community Environmental Response Facilitation Act of 1992. RCRA governs the generation, treatment, storage, and disposal of hazardous wastes. CERCLA provides for consultation with natural resources trustees and cleanup of any release of a hazardous substance (excluding petroleum) into the environment.

10.1b. E.O. 12088, as amended, directs Federal agencies to: comply with "applicable pollution control standards," in the prevention, control, and abatement of environmental pollution; and consult with the EPA, State, interstate, and local agencies concerning the best techniques and methods available for the prevention, control, and abatement of environmental pollution. For construction or operation of FAA facilities outside the United States, the FAA must ensure that such construction or operation complies with the environmental pollution control standards of general applicability in the host country or jurisdiction.

10.1c. Executive Order 12580, Superfund Implementation amended by Executive Order 13016 and 12777 delegates most response authorities to EPA and USCG for abatement. Agencies must participate in response teams with opportunity for public comment before removal action is taken.

10.1d. FAA actions to fund, approve, or conduct an activity may require consideration of hazardous material, pollution prevention, and solid waste impacts in NEPA documentation. NEPA documents prepared in support of project development should include an appropriate level of review regarding the hazardous nature of any materials or wastes to be used, generated, or disturbed by the proposed action, as well as the control measures to be taken. The CEQ Memorandum on Pollution Prevention and the National Environmental Policy Act encourages early consideration, for example, during scoping, of opportunities for pollution prevention. FAA should, to the extent practicable, include pollution prevention considerations in the proposed action and its alternatives; address pollution prevention in the environmental consequences section; and disclose in the record of decision the extent to which pollution was considered. A discussion of pollution prevention may also be appropriate in an EA. Consideration of these issues in evaluating the effects of proposed actions should begin with an understanding of the following three terms:

(1) Hazardous Material – any substance or material that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce (49 CFR part 172, table 172.101). This includes hazardous substances and hazardous wastes.

(2) Hazardous Waste – under the Resource Conservation and Recovery Act (RCRA) a waste is considered hazardous if it is listed in, or meets the characteristics described in 40 CFR part 261, including ignitability, corrosivity, reactivity, or toxicity.

(3) Hazardous Substance – any element, compound, mixture, solution, or substance defined as a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and listed in 40 CFR part 302. If released into the environment, hazardous substances may pose substantial harm to human health or the environment.

10.2 FAA RESPONSIBILITIES.

10.2a. The FAA must comply with applicable pollution control statutes and requirements that may include, but may not be limited to, those listed in Appendix 2 of Order 1050.10B, Prevention, Control, and Abatement of Environmental Pollution at FAA Facilities.

10.2b. In accordance with Order 1050.19, Environmental Due Diligence Audits in the Conduct of FAA Real Property Transactions, an Environmental Due Diligence Audit (EDDA) shall be conducted to evaluate subject properties for potential hazardous substances contamination that could result in future FAA liabilities.

10.2c. FAA actions to fund or approve airport layout plans for terminal area development may also require consideration of solid waste impacts in NEPA documentation. A preliminary review should indicate if the projected quantity or type of solid waste generated or method of collection or disposal will be appreciably different than would be the case without the action. Special attention shall be given to the control of hazardous waste.

10.2d. NEPA documents should include appropriate information as described below.

(1) The environmental document should demonstrate that the FAA (or applicant as appropriate) has determined whether hazardous wastes as defined in 40 CFR part 261 (RCRA) will be generated, disturbed, transported or treated, stored or disposed, by the action under consideration. If so, management of these wastes is regulated by 40 CFR parts 260-280 and transportation is governed by 49 CFR parts 171-199. To the extent that the existence of hazardous wastes affects phasing of project construction, analysis of alternatives and consideration of mitigation measures, the means for compliance with applicable regulations must be discussed. It may be helpful to briefly discuss the means for compliance with applicable regulations in the NEPA documentation. For example, operators of activities that would cause hazardous waste must obtain a RCRA hazardous waste generator identification number from EPA or an authorized State. It should also demonstrate that the FAA or applicant has considered pollutant prevention and control in accordance with EO 12088.

(2) The document should analyze alternatives considering applicable permitting requirements, and in the case of direct actions or funding, Federal and State guidelines and

regulations on procurement of recycled or recyclable productions, the source separation and recycling of recyclable products and solid waste storage, transport, or disposal.

(3) The document should analyze the cost and feasibility of alternatives regarding the avoidance or use of hazardous materials, hazardous wastes, recycled materials, recyclable products, and any related need for permits, remediation, storage, transport, or disposal.

(4) The document should indicate the presence of any sites within the action area listed or under consideration for listing on the National Priorities List (NPL) established by EPA in accordance with CERCLA. NEPA documentation should include a discussion of the impact of any NPL or NPL candidate sites on the action and/or impacts of the action on any NPL or NPL candidate sites. NEPA documentation should also identify sites in the vicinity that have been designated RCRA Solid Waste Management Units (SWMU's) and that may impact or be impacted by the action.

(5) The NEPA documentation should reflect that consultation with the appropriate State agency (or EPA) has been initiated. If a formal agreement has been reached, it should be included in the document itself or incorporated by reference, as appropriate. In many cases, construction may not commence until a formal agreement between the FAA (or action sponsor) and the State agency (or EPA) has been executed.

(6) The NEPA documentation, i.e., FONSI, EIS, Record of Decision, and FAA construction contracts should include a provision that in the event previously unknown contaminants are discovered during construction, or a spill occurs during construction, work should stop until the National Response Center (NRC) is notified. The NRC number is (800) 424-8802.

10.3 ANALYSIS OF SIGNIFICANT IMPACTS.

10.3a. Generally, additional information or analysis is needed only if problems are anticipated with respect to meeting the applicable local, State, Tribal, or Federal laws and regulations on hazardous or solid waste management. Additional data needed may include results of any further consultation with affected agencies and measures to be taken to minimize the impacts. Disposal that would adversely affect water quality or other environmental resources may be discussed under those sections of the environmental analysis addressing affected resources, with the hazardous material section cross-referencing those sections.

10.3b. Actions that involve property listed (or potentially listed on) the NPL are considered significant pursuant to NEPA by definition. In other cases, only an unresolved issue may warrant an EIS. NPL sites usually encompass relatively large areas, such as an entire military base, an electric power generation facility, or even a dumping ground of several million used automobile tires. Not all of the physical grounds within the boundaries of an NPL site are contaminated, which leaves space for siting a facility on "clean" land within the boundaries of an NPL site. If an FAA action involves acquiring property on an NPL site, by definition, it normally is considered a major action with significant impacts. Both FAA NEPA and EDDA guidance

require consideration of exposure to hazardous materials and minimizing further contaminant releases through pollution prevention design when siting on or near contaminated properties. These considerations warrant thorough NEPA environmental analysis. However, an EIS is not necessarily required. Chapter 4, paragraph 405g, of this order allows for mitigating impacts to thresholds below significance, such as siting on “clean” grounds within contaminated properties or NPL sites. Therefore, if appropriately mitigated, acquisition of land within the boundaries of an NPL site does not always have to be viewed as a major action with significant impacts.

10.3c. The cost and feasibility of any necessary remediation of hazardous waste contamination should be considered and for guidance on considering existing environmental contamination issues associated with proposed actions to acquire land consult Order 1050.19.

10.3d. For guidance on design, construction, and operational compliance of FAA facilities with pollution control statutes, the most current version of the following FAA orders should be consulted:

(1) Order 1050.10, Prevention, Control, and Abatement of Environmental Pollution at FAA Facilities.

(2) Order 1050.14, Polychlorinated Biphenyls (PCB) in the National Airspace System.

(3) Order 1050.15, Underground Storage Tanks at FAA Facilities.

(4) Order 1050.18, Chlorofluorocarbons and Halon Use at FAA Facilities.

10.3e. NPL sites, EPA National Priorities List of Superfund sites requiring priority cleanup under the Superfund Program, usually encompass relatively large areas, such as an entire military base, an electric power generation facility or even a dumping ground of several million used automobile tires. Not all of the physical grounds within the boundaries of an NPL site are contaminated, which leaves space for siting a facility on "clean" land within the boundaries of the NPL site. If an FAA action involves acquiring property on an NPL site, it is normally considered a major action with significant impacts. Both FAA NEPA and EDDA guidance require consideration of exposure to hazardous materials and minimizing further contaminant releases through pollution prevention design when siting on or near contaminated properties. These considerations warrant thorough NEPA environmental analysis. However, an EIS is not necessarily required.

10.3f. Chapter 4, paragraph 405g (mitigation) allows for mitigating impacts to thresholds below significance, such as siting on "clean" grounds within contaminated properties or NPL sites. Therefore, appropriately mitigated, acquisition of land within the boundaries of an NPL site does not always have to be viewed as a major action with significant impacts.

10.3g. "Would this require an EIS for ALP approval covering land on the NPL?" This depends on whether or not the actual ground needed is contaminated or just within the boundaries of the NPL site. If it is "clean" land within the boundaries an EIS is not required. If

some contamination is present, then mitigation to minimize exposure and further releases should be prepared, and the cost of remediation to both the FAA and the Airport Sponsor should be considered. However, if the magnitude of remediation and costs are significant, then preparation of an EIS is justified.

SECTION 11. HISTORICAL, ARCHITECTURAL, ARCHEOLOGICAL, AND CULTURAL RESOURCES

Statute	Regulation	Oversight Agency
Laws Governing National Historic Preservation Programs, National Natural Landmarks, and National Historic Landmarks:		
National Historic Preservation Act of 1966, as amended, including Executive Order 11593, Protection and Enhancement of the Cultural Environment (36 FR 8921, May 13, 1971) [16 U.S.C. 470, 470 note] [PL 102-575 (1992)]	36 CFR parts 60 (National Register of Historic Places (NRHP)), 61 (State and Local Preservation Programs), 62.1 (National Natural Landmarks), 63 (NRHP), 65, 65.1 (National Historic Landmarks), 68 (standards), 73 (World Heritage Program), 78 (waiver of Federal agency section 110 responsibilities), 79 (curation) and 800 (consultation), as revised (65 FR 77697; December 12, 2000, effective January 1, 2001)	National Park Service, various offices Advisory Council on Historic Preservation State Historic Preservation Officer Tribal Historic Preservation Officer
Laws Governing the Federal Archeology Program:		
Antiquities Act of 1906 [16 U.S.C. 431, 432, 433] [PL 59-209 (1906)]	43 CFR part 3 25 CFR part 261	Department of Interior, National Park Service
Archaeological and Historic Preservation Act of 1974, as amended [16 U.S.C. 469-469c] [PL 89-665]	Guidelines for Archeology and Historic Preservation: Standards and Guidelines (DOI) (48 FR 44716, September 29, 1983) 36 CFR part 68	Departmental Consulting Archeologist and Archeological Assistance Program, National Park Service
Archaeological Resources Protection Act of 1979, as amended [16 U.S.C. 470aa-470mm] [PL 96-95 (1979)]	43 CFR parts 3 and 7 36 CFR part 79 25 CFR part 262 Federal Archeological Preservation Strategy	Departmental Consulting Archeologist and Archeological Assistance Program, National Park Service
Native American Graves Protection and Repatriation Act of 1990 [25 U.S.C. 3001] [PL 101-601 (1990)]	43 CFR part 10 25 CFR 262.8	Departmental Consulting Archeologist and Archeological Assistance Program, National Park Service

Statute	Regulation	Oversight Agency
Other Major Federal Historic and Cultural Resource Preservation Laws and Executive Orders		
American Indian Religious Freedom Act of 1978 [42 U.S.C. 1996, 1996 note] [PL 95-341 (1978)]	43 CFR 7.7 and 7.32 25 CFR 262.7	
Department of Transportation Act [49 U.S.C. 303]		Department of Transportation
Public Building Cooperative Use Act of 1976 [40 U.S.C. 601(a), 601(a)(1), 606, 611(c), 612(a)(4)] [PL 94-541]	41 CFR parts 101-17, 101-17.002(l), (m), (n) (rural areas), 101.17.002(i)(2) (urban areas), and 101-19	General Services Administration
Executive Order 13006, Locating Federal Facilities on Historic Properties in Our Nation's Central Cities (61 FR 26071, May 24, 1996)		Advisory Council on Historic Preservation
Executive Order 13007, Indian Sacred Sites (61 FR 26771, May 29, 1996)		Assistant to the President for Domestic Policy
Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (65 FR 67249, November 9, 2000), and the Presidential Memorandum of April 29, 1994, Government-to-government Relations with Native American Tribal Governments.		
Executive Order 11593, Protection and Enhancement of the Cultural Environment (36 FR 8921, May 13, 1971) (16 U.S.C. 470 note)		Advisory Council on Historic Preservation

11.1 REQUIREMENTS.

11.1a. The National Historic Preservation Act (NHPA) of l966, as amended, establishes the Advisory Council on Historic Preservation (ACHP) and the National Register of Historic Places (NRHP) within the National Park Service (NPS). Section 110 governs Federal agencies responsibilities to preserve and use historic buildings; designate an agency Federal Preservation Officer (FPO); identify, evaluate, and nominate eligible properties under the control or jurisdiction of the agency to the National Register. Section 106 requires Federal agencies to consider the effects of their undertaking on properties on or eligible for inclusion in the NRHP; Compliance with section 106 requires consultation with the ACHP, the State Historic

Preservation Officer (SHPO), and/or the Tribal Historic Preservation Officer (THPO) if there is a potential adverse effect to historic properties on or eligible for listing on the National Register of Historic Places. Consultation on preservation-related activities may also occur with other Federal, State, and local agencies, Tribes, Native Hawaiian organizations, the private sector, and the public. Section 112 addresses professional standards. Section 314 discusses confidentiality requirements that may apply to an undertaking.

11.1b. The Archeological and Historic Preservation Act of l974 provides for the preservation of historic American sites, buildings, objects, and antiquities of national significance by providing for the survey, recovery, and preservation of historical and archeological data which might otherwise be destroyed or irreparably lost due to a Federal, Federally licensed, or Federally funded action. The DOI's Standards and Guidelines (48 FR 44716, September 29, 1983) advise Federal agencies on implementation of this law.

11.1c. The Archaeological Resources Protection Act (ARPA) prohibits unauthorized excavation of archaeological resources on Federal or Indian lands, establishing standards for permissible excavation by permit. ARPA requires federal agencies to identify archaeological sites on federal lands.

11.1d. The Native American Graves Protection and Repatriation Act (NAGPRA) deals with the disposition of cultural items, including human remains, by a Federally funded repository. Additionally, NAGPRA governs the inadvertent discovery of cultural items on Federal or Tribal lands. It provides for the inventory, protection and return of cultural items to affiliated Tribes. NAGPRA requires ARPA permits, as well as consultation with Tribes, for intentional excavation and removal of cultural items from Federal or Tribal lands. Its regulations include provisions that, upon inadvertent discovery, the federal agency will cease all activity in the area of discovery, protect the discovered items, and immediately notify the affected Tribe. Disposition of the items, which will include consultation, must then be carried out in accordance with NAGPRA procedures. For additional information on consultation, see the ACHP's policy statement of June 11, 1993, on Consultation with Native Americans Concerning Properties of Traditional Religious and Cultural Importance.

11.1e. The Antiquities Act of 1906 was the first general law providing protection for archeological resources, yet its permitting and prosecution sections have essentially been superseded by ARPA. It authorizes the President to declare areas of public lands as national monuments and to reserve or accept private lands for that purpose.

11.1f. The Historic Sites Act of 1935 declares as national policy the preservation for public use of historic sites, buildings, objects, and properties of national significance. It gives the Secretary of the Interior authority to make historic surveys, to secure and preserve data on historic sites, and to acquire and preserve archeological and historic sites. This act also establishes the National Historic Landmarks program for designating properties having exceptional value in commemorating or illustrating the history of the United States. It gives the Secretary of the Interior broad powers to protect nationally significant historic properties, including the Secretary's authority to establish and acquire nationally significant historic sites.

11.1g. The American Indian Religious Freedom Act of 1978 requires consultation with Native American groups concerning proposed actions on sacred sites or affecting access to sacred sites. It establishes Federal policy to protect and preserve for American Indians, Eskimos, Aleuts, and Native Hawaiians their right to free exercise of their religion. It allows these peoples to access sites, use and possess sacred objects, and freedom to worship through ceremonial and traditional rites. In practical terms, the act requires Federal agencies to consider the impacts of their actions on religious sites and objects that are important to Native Americans, including Alaska Natives, and Native Hawaiians, regardless of the eligibility for the National Register of Historic Places.

11.1h. The Public Building Cooperative Use Act of 1976, along with NEPA and NHPA, encourages the acquisition and use of space in suitable buildings of historic, architectural, or cultural significance. The associated regulations provide procedures for implementing this goal in urban and rural areas.

11.1i. Executive Order 13006, Locating Federal Facilities on Historic Properties in Our Nation's Central Cities, requires Federal agencies, when operationally appropriate and economically prudent, to use and maintain historic properties and districts, especially those located in central business areas and to give first consideration when locating Federal facilities to historic properties within historic districts, then developed or undeveloped sites within historic districts, and lastly to historic properties outside of historic districts. Any rehabilitation or construction that is undertaken must be architecturally compatible with the character of the surrounding historic district or properties**.**

11.1j. Executive Order 13007, Indian Sacred Sites, applies to Federal agencies that manage Federal lands, defined as "any land or interests in land owned by the United States, including leasehold interests held by the United States, except Indian trust lands. Agencies, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, must: (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners; and (2) avoid adversely affecting the physical integrity of such sacred sites. Agencies shall maintain the confidentiality of sacred sites by virtue of their established religious significance to, or ceremonial use by, an Indian religion; provided the Tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site. The responsible FAA official should consult the provisions in Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (65 FR 67249, November 9, 2000), and the Presidential Memorandum of April 29, 1994, Government-to-government Relations with Native American Tribal Governments. Agencies are required, in formulating policies significantly or uniquely affecting Tribes, to be guided, to the extent permitted by law, by principles of respect for Tribal self-government and sovereignty, for Tribal treaty and other rights, and for responsibilities that arise from the unique legal relationship between the Federal Government and Tribes. The EO requires Federal agencies to consult on a government-to-government basis with Tribes. This provides meaningful and timely input in development of regulatory policies on matters that significantly or uniquely affect their communities (see

63 FR 27655, May 19, 1998). Additional information may be obtained from the FAA Federal Preservation Officer.

11.1k. Executive Order 11593, Protection and Enhancement of the Cultural Environment (36 FR 8921, May 13, 1971; reprinted in 16 U.S.C. 470 note), and Order DOT 5650.1, Protection and Enhancement of the Cultural Environment, November 20, 1972, require that Federal plans and programs contribute to the preservation and enhancement of sites, structures, and objects of historic, architectural, or archaeological significance.

11.2 FAA RESPONSIBILITIES.

11.2a. **Consultation**. The SHPO/THPO and other appropriate sources must be consulted for advice early in the environmental process. See 36 CFR part 800 which governs the section 106 consultation process under NHPA and encourages coordination between section 106 and other statutes and with environmental and planning reviews under State or local ordinances. (Undertakings that have the potential to significantly affect historic properties pursuant to NEPA constitute an extraordinary circumstance requiring an EA even if the project normally qualifies as a categorical exclusion under NEPA. Findings of no historic properties present or affected, or no historic properties adversely affected, under NHPA section 106 support determinations of no use (either constructive or physical) under section 4(f) of the DOT Act). Findings of adverse effects do not automatically trigger section 4(f), unless the effects substantially impair the affected resource's historical integrity. See also specific requirements in 36 CFR part 800 and ACHP guidance for public involvement during the consultation process.

11.2b. **Determination of Undertaking**. The responsible FAA official determines whether the proposed action is an "undertaking," as defined in 36 CFR 800.16(y) (and not an undertaking that is merely subject to State or local regulation administered pursuant to a delegation or approval by a Federal agency), and whether it is a type of activity that has the potential to cause adverse effects on historic properties eligible for or listed on the NRHP. If the agency determines, and the SHPO/THPO does not object, that an undertaking does not have the potential to have an effect on historic properties, a historical or cultural resource survey is not necessary and the FAA may issue a determination that the action has no effect. If an undertaking may have an adverse effect, the first step is to identify the area of potential effect (APE) and the historical or cultural resources within it (see Secretary's Standards and Guidelines for Identification).

11.2c. **Determination of Area of Potential Effect (APE).** It is the FAA's responsibility to determine the APE. This determination is made generally in consultation with the appropriate SHPO(s)/THPO(s). APE means the geographic area or areas within which an undertaking may cause changes in the character or use of historic properties, if any such properties are subsequently identified within the APE. The ACHP and the SHPO/THPO may provide technical advice.

11.2d. **Identification and Evaluation Process**. The FAA or designee must survey the APE to identify properties potentially eligible for or listed on the NRHP. If any eligible or listed property is identified within the area of the proposed action's APE, the ACHP's regulations,

Protection of Historic Properties (36 CFR part 800) will be consulted and followed. Additional information may be obtained from the FAA's Federal (Historic) Preservation Officer in the Office of Environment and Energy and through cultural resources surveys in the APE.

11.2e. **Traditional Cultural Places**. Traditional cultural places (TCP's) may be eligible for listing on the NRHP's and thus may become the subject of section 106 consultation pursuant to 36 CFR part 800 and the National Register Bulletin 38 on "Guidelines for Evaluating and Documenting Traditional Cultural Properties." Bulletin 38 identifies NRHP criteria for determining whether a place qualifies as a TCP under the NHPA. (Other NPS Bulletins are available to assist in identifying other types of historic properties. Many of these are on file with the FAA Federal Preservation Officer in the Office of Environment and Energy.) The FAA may obtain necessary information to apply the criteria by informally consulting. If informal consultation does not resolve issues relating to identification of properties as NRHP eligible or the determination of effect, then the FAA must follow the procedures for identification and analysis outlined in the Secretary of the Interior's Standards and Guidelines.

11.2f. **Protected Tribal Resources.** Protected Tribal Resources are those natural resources, properties, sites, and items of traditional or customary religious or cultural importance, either on or off Indian lands, retained, by, or reserved by or for, Tribes through treaties, statutes, judicial decisions, or executive orders, including Tribal trust resources.

(1) **Indian Sacred Sites**. If the site is an Indian Sacred Site, as defined in Executive Order 13007, regardless of whether it is the subject of section 106 consultation or eligible for the NRHP, the FAA must consult the Tribe under the AIRFA, E.O. 13007, Indian Sacred Sites, and the Executive Memorandum of April 29, 1994, "Government-to-Government Relations With Native American Tribal Governments."

11.2g. **Cultural Items**. If cultural items, as defined by Section 2(3) of NAGPRA, are discovered on Federal or Tribal lands, NAGPRA applies. Various archeological statutes, including ARPA and State, local and Tribal laws and ordinances may also apply. Criminal laws and the need to preserve evidence may also be involved when human remains are found.

11.2h. **Determination of Eligibility**. If the SHPO/THPO concurs with the FAA's determination regarding eligibility of a Traditional Cultural Property or Protected Tribal Resource for inclusion in the NRHP, the consultation moves to the next step. If the SHPO/THPO does not concur, the FAA must seek a determination of eligibility from the Keeper of the NRHP. The Keeper of the NRHP is responsible for issuing formal determination of NRHP eligibility when FAA and the SHPO/THPO can't agree on a resource's eligibility for the National Register. (See also 36 CFR part 63.) Any person can request ACHP review of an agency's findings related to identification of historic properties; evaluation of historic significance; and finding that no historic properties are present. As a result of such a request, the ACHP may request the FAA to seek a formal determination from the Keeper. This is called a "Determination of Eligibility" (DOE).

11.2i. **Other Laws**. If no properties have been identified within the APE, and no resources have been identified that are subject to ARPA, NAGPRA, AIRFA, section 4(f) of the DOT Act, the Archeological and Historic Preservation Act, E.O. 13007, Indian Sacred Sites, or other laws covering specific types of cultural resources, then no further analysis is needed.

11.2j. Effect Findings. A FAA undertaking would affect a property that is on or eligible for inclusion in the NRHP, if the action has the potential to alter the characteristics of the property making it eligible for inclusion in the NRHP. Regulations discussing the various degrees of effect are presented in 36 CFR Parts 800.4(d) and 800.5. Federal agencies can make one of three types of "effects findings" for an action. The level of finding depends upon how severely a project would alter the characteristics of a property that make it eligible for the NRHP. The following sections discuss the three types of Findings: "no properties affected;" "no adverse effect;" and "adverse effect" (see 36 CFR 800.4(d) and 800.5, if necessary for more detailed information). Although the Responsible FAA Official works closely with the SHPO/THPO to determine an effects finding, the FAA is ultimately responsible for that decision, not the SHPO or THPO.

11.2k. Finding of No Historic Properties Affected.

(1) Here, the Responsible FAA official can either determine that no historic properties on or eligible for inclusion in the NRHP are present in the Area of Potential Effect (APE) or that the proposed undertaking will not affect any NRHP properties in the APE. Before making a final decision on the undertaking's effects, the FAA must provide information specified in 36 CFR 800.11(d) to the SHPO/THPO. This information must describe:

(A) the undertaking;

(B) its APE;

(C) FAA efforts to identify historic properties; and

(D) FAA's basis for the finding.

(2) The FAA must also notify all consulting parties of this finding and ensure that the above information is available to them. FAA's responsibilities under Section 106 are complete if the SHPO/THPO does not object to FAA's finding within 30 days after receiving the required information. Use of certified mail or other means capable of providing proof of receipt of material is encouraged to record the date when the 30-day review period began.

11.2l. Finding of No Adverse Effect.

(1) If a NRHP-eligible property occurs within the undertaking's APE and the proposed action may affect the property's historic characteristics, the Responsible FAA Official must apply the criteria of effect listed in 36 CFR 800.5(a). The Official must examine the potential effects in consultation with the SHPO/THPO and any Tribe or Native Hawaiian organization attaching

religious or cultural importance to the identified property. 36 CFR 800.5(a)(3) permits phased assessments of effects when alternatives the agency is considering involve corridors, large land areas, or when access to property is restricted. The FAA Official may propose a "finding of no adverse effect" after determining that the undertaking would not:

(A) physically destroy the property;

(B) alter the property, but, if alterations would occur, they meet the requirements of the Secretary of the Interior's "Standards for Treatment of Historic Properties" (36 CFR part 68);

(C) remove the property from its historic location;
introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's setting, provided the setting contributes to the property's historical significance; or

(D) through transfer, sale, or lease, diminishes the long-term preservation of the property's historic significance that Federal ownership or control would otherwise ensure.

(2) The FAA Official must provide the SHPO/THPO, any Tribe or Native Hawaiian organization attaching religious or cultural importance to the subject historic property, and all consulting parties with a notice of the proposed finding and the information listed in 36 CFR 800.11(e). This information must:

(A) describe the project and how FAA is involved;

(B) describe the APE;

(C) describe steps taken to identify historic properties;

(D) describe affected historic properties and the characteristics making them NRHP-eligible;

(E) describe the action's effects on historic properties;

(F) provide an explanation of why the adverse affect criteria did not apply; and

(G) contain copies or summaries of views that consulting parties or the public provided.

(3) The SHPO/THPO must provide a response to FAA's proposed finding within 30 days of receiving the finding and all documentation supporting it. If the SHPO/THPO does not reply within the 30-day period, FAA may assume that the SHPO/THPO agrees with the finding and proceed with the action, unless the ACHP is reviewing the finding per 36 CFR 800.5(c)(3).

(4) If the SHPO/THPO disagrees with FAA's finding within the 30-day period, the SHPO/THPO must provide reasons for that objection. FAA must discuss the objection with the SHPO/THPO to resolve it, or ask ACHP to review it. Likewise, if any Tribe or Native Hawaiian organization attaching religious or cultural importance to the subject property objects to the finding within the 30-day period, it must also notify FAA of its objection, explain the reasons for the objections, and ask ACHP to review the FAA's finding. Also, ACHP may, on its own initiative, within the 30-day period, request FAA'

(5) When a finding is submitted to the ACHP upon request of the FAA, the SHPO/THPO, or at the request of the Council, the FAA shall submit the documentation specified in 36 CFR 800.11(e). The Council shall review the finding and notify the FAA of its determination as to whether adverse effect criteria have been correctly applied within 30 days of receiving the documented finding from the FAA. ACHP's opinion on such matters will be advisory and will not require the FAA to proceed to any further step in the review process. If ACHP does not respond within 30 days, FAA may assume ACHP concurrence with its finding.

(6) The FAA Official must maintain a record of this finding and provide information on it when the public requests. However, the FAA Administrator or any public official receiving grant assistance may protect the confidentiality of information per Section 304 of NHPA (see 36 CFR 800.11(c)).

11.2m. Finding of Adverse Effect. If a NRHP-eligible property occurs within the undertaking's APE and the project may alter the property's historic characteristics, the Responsible FAA Official must apply the criteria listed in 36 CFR 800.5(a) to determine the how the action would affect those characteristics. The Official must examine the effects in consultation with the SHPO/THPO and any Tribe or Native Hawaiian organization attaching religious or cultural importance to an identified property. The FAA Official will make a "finding of adverse effect" when the undertaking would:

(1) physically destroy the property;

(2) alter the property so severely that it would not meet the requirements of the Secretary of the Interior's "Standards for Treatment of Historic Properties" (36 CFR part 68);

(3) remove the property from its historic location;

(4) introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's setting, provided that setting contributes to the property's historical significance; or

(5) through transfer, sale, or lease, diminishes any long-term preservation of a property's historic significance that Federal ownership or control would preserve.

11.2n. Resolving Findings of Adverse Effect. Due to the level of impact on the historic property leading to a "finding of adverse effect," 36 CFR 800.6 requires Federal agencies to try

to find a way to avoid, minimize, or mitigate those impacts. This section summarizes that process (see 36 CFR 800.6 as needed for more detail).

(1) Consultation. Resolution of adverse effects will involve numerous parties having substantial interest in the project. Such consultation is intended to develop and evaluate alternatives or procedures to avoid, minimize, or mitigate the identified adverse effects on the historic property. The following sections discuss those involved in this required consultation.

(A) SHPO/THPO. The FAA Official will consult with the SHPO/THPO due to their duty to protect a state or Tribe's historic resources.

(B) ACHP. The FAA Official must notify the ACHP of the finding of adverse effect and provide a copy of the information listed in 36 CFR 800.11(e) (noted for convenience in section 11.2(l)(2)(A)-(G) above). The notice shall invite ACHP participation: if the Official wishes to involve the ACHP; if the action would adversely affect a National Historic Landmark; or if the FAA prepares a Programmatic Agreement pursuant to 36 CFR 800.14(b)). In addition to FAA's request, any consulting party, Tribe or Native Hawaiian organization may, on its own, request ACHP participation at any time (36 CFR 800.6(a)(ii)). The ACHP must notify FAA and all consulting parties that it will/will not participate in the proceedings within 15 days of receiving the request. If ACHP will participate, it must notify the FAA Administrator and provide the FAA Official and other consulting parties with a written notice that it will do so. In this instance, consultation to resolve effects will include the FAA, SHPO/THPO, ACHP, and any Tribe or Native Hawaiian organization attaching religious or cultural importance to the affected resource.

(C) Tribes and Native Hawaiian organizations. When the affected property is of religious or cultural importance to Tribes or Native Hawaiian organizations, the consultation must include them. These parties must receive information specified in 36 CFR 800.11(e) (in section 11.2(l)(2)(A)-(G) above), unless protected under the confidentiality provisions of 36 CFR 800.11(c).

(D) Other consulting parties. The FAA Official and SHPO/THPO and ACHP, if it is participating, may agree to invite other entities with a substantial interest in the proposed action. The FAA must invite local government officials having jurisdiction over affected areas or a proponent that will assume a specific role or responsibility in the resolving impacts (e.g., an airport sponsor or applicant for a commercial launch license). These parties must receive information specified 36 CFR 800.11(e) (in section 11.2(l)(2)(A)-(G) above), unless protected under the confidentiality provisions of 36 CFR 800.11(c).

(E) Public involvement. The FAA must provide the public with an opportunity to express their views on resolving adverse effects. To allow informed participation, FAA must make the information 36 CFR 800.11(e) specifies available for public review, unless confidentiality prohibits this (36 CFR 800.11(c)).

(2) Memorandum of Agreement (MOA). In most instances, the FAA Responsible Official and SHPO/THPO work to avoid, minimize, or mitigate identified adverse effects. Sometimes the ACHP is included in this effort when it chooses to enter the process or the FAA invites it to do so. A MOA that these parties and, in some cases, invited parties prepare and sign, verifies that the FAA has complied with Section 106. It describes the undertaking and contains instruction and terms that will the FAA will ensure are implemented to avoid, minimize, or mitigate adverse effects. When the ACHP is not participating and FAA and the SHPO/THPO cannot agree, the FAA must request that the ACHP join in the consultation. Detailed information on MOA's is contained in 36 CFR 800.6, particularly, 36 CFR 800.6(b) and (c). Appendix A of these regulations provides detailed guidance on addressing archeological sites. The following sections provide further information on the MOA.

(A) Signatories. These parties are solely responsible for developing, amending, and terminating the MOA. If the ACHP is not participating in the resolving adverse effects, the FAA Approving Official and SHPO/THPO will sign the MOA. If ACHP is participating, it too will sign the MOA.

(B) Invited signatories. The Approving FAA official may invite other parties to sign the MOA. Typically, these parties would be representatives of Tribes or Native Hawaiian organizations attaching religious or cultural significance to the affected historic resource. They may also be any party that will be responsible for implementing the MOA's terms and conditions of the MOA (e.g., airport sponsor, licensee for commercial space). It is important to note that any party refusing to be an invited signatory does not negate MOA or make it invalid.

(C) Concurring parties. The Approving FAA official or other signatory(ies) may invite all consulting parties to concur with the MOA. Refusal of a party to concur in the MOA does not negate or invalidate the MOA.

(D) Other information. Information on additional MOA content addressing duration, subsequent discoveries, amendments, and terminations is in 36 CFR 800.6(c)(4)-(7).

11.2o. Failing to Resolve Adverse Effects. It is FAA's intent to resolve adverse effects in all cases through consultation and cooperation; however, if further efforts are not productive, follow the instructions in 36 CFR 800.7. In such instances, the FAA Administrator must make the final decision regarding the action's fate (see 800.7(c)(4) for instructions in this case).

11.2p. Coordinating Section 106 and NEPA. To reduce paperwork and redundancy between the NEPA and Section 106 processes, Federal agencies may use the NEPA process to make their historical impact review more efficient and effective. But to do so, close adherence to the requirements of 36 CFR 800.8 is required. Cooperation among FAA, SHPO/THPO, consulting parties, the public, and in some instances, ACHP, is a key factor in combining the NEPA and Section 106 processes. Specific requirements for EA and EIS preparation and content are detailed in 36 CFR 800.8(c)(1)-(4). Critical components of this efficiency effort include:

(1) providing the SHPO/THPO and ACHP with advance notice that FAA will use the NEPA process to satisfy its Section 106 responsibilities;

(2) defining historic impacts and agency responsibilities under Section 106 early in the planning process to consideration of the widest range of alternatives;

(3) coordinating planning and/or scoping through agency consultation and public participation to facilitate identifying data needs, analyses, reviews, and the documentation that NEPA and Section 106 require;

(4) ensuring that the EA, DEIS, or FEIS is submitted for review to the SHPO/THPO and Tribes or Native Hawaiian organizations attaching religious or cultural significance to the affected resource before the NEPA document is available for public comment;

(5) ensuring that DEIS's and FEIS's are submitted to the ACHP for review;

(6) ensuring that a MOA is prepared when an EA/FONIS is prepared for a project; and

(7) using a ROD, in lieu of a MOA, to define binding commitments to avoid, minimize, or mitigate adverse effects on historic properties when an EIS is prepared for a project.

11.3 SIGNIFICANT IMPACT THRESHOLD. Regulations at 36 CFR 800.8(a) state that an adverse effect finding does not automatically trigger preparation of an EIS (i.e., a significant impact). The section 106 consultation process includes consideration of alternatives to avoid adverse effects on National Register listed or eligible properties; of mitigation measures; and of accepting adverse effects. But in all cases, the FAA makes the final determination on the level of effect and whether the appropriate action choice is an EIS or FONSI. Advice from the ACHP and SHPO/THPO may assist the FAA in making this determination.

11.4 ANALYSIS OF SIGNIFICANT IMPACTS.

11.4a. As noted above, FAA can use the "streamlining" process or "normal" process to meet Section 106 requirements for projects that are subjects of EIS's.

11.4b. Using the "NEPA/Section 106 streamlining process." As noted in section 11.2(p) of this appendix, FAA may use the NEPA process to comply with Section 106 requirements. In this case, the Responsible FAA Official shall adhere to the specific instructions in 36 CFR 800.8(c)(1)-(4) to ensure FAA has met the required steps to use the "streamlining" provision. This information and any other developed during the Section 106 consultation process should be sufficient for EIS purposes.

11.4c. Using the "normal" Section 106 process. If FAA is going to prepare an MOA to meet Section 106 requirements for a project assessed in an EIS, the MOA must contain the information discussed in 36 CFR 800.11.(f) and in section 11.2n(2)(A)-(D) of this appendix. If FAA has executed a MOA with other signatories before it circulates the DEIS for comment, the

DEIS should include that MOA. In all cases, an executed MOA must be included in the FEIS, unless extenuating circumstances prohibit this. As a result, it is critical that FAA execute the MOA so that FEIS contains it. Waiting to do so until preparation of a ROD is not the preferred way to complete this process to ensure that the FEIS adequately informs the public about measures that will be implemented to avoid, minimize, or mitigate adverse effects.

11.5 POST-REVIEW DISCOVERIES. There may be times when, after work on a project has begun historic properties are discovered. In such instances, the FAA must address both the existence of such properties and any potential adverse effects resulting from the project. This can be done in one of two ways.

11.5a. When pre-construction identification efforts indicate that historic properties are likely to be discovered. At times, the identification of historic properties efforts for a proposed project, especially a project involving excavation or ground-disturbing activities, may indicate that potentially eligible historic or archeological resources are likely to be discovered during construction. If pre-construction identification efforts indicate that historic properties are likely to be discovered, the FAA shall address such a potential discovery in it's initial no adverse effect determination, Programmatic Agreement (if one has been developed) or Memorandum of Agreement (MOA). In particular, a process to resolve any adverse effects, including excavation and recovery, upon such properties must be developed. The process can include provisions to halt construction in the immediate vicinity of the discovered properties if deemed appropriate. When the FAA has developed such a process and then discovers historic properties after completing Section 106 requirements, the FAA should follow the plan that was approved during the Section 106 consultation. Actions in conformance with the process satisfy the FAA's responsibilities under Section 106. If the adverse effect on the historic property is so severe that it will limit the use of the property, then section 4(f) of the DOT Act may be triggered. When the FAA has not prepared a plan to address discovery of unanticipated historic properties, then the FAA must afford the SHPO/THPO, the ACHP, and interested parties an opportunity to comment on effects to these newly discovered properties in one of several ways. (See 36 CFR part 800.13 for additional information.)

11.5b. Post-review discoveries without prior planning. At times, historic properties or unanticipated effects on historic properties may be discovered that were completely unanticipated, even through the identification of historic properties and determination of adverse effects efforts. The FAA should make reasonable efforts to avoid, minimize or mitigate adverse effects, if any, to such properties.

(1) Discovery prior to project approval or prior to starting construction on an approved project. If the FAA has not yet approved the undertaking or if construction on an approved project has not yet begun, and the FAA discovers historic properties or unanticipated effects on the historic properties, the FAA must consult to resolve any adverse effects as defined in 36 CFR 800.5.

(2) When discovered property is of value solely for its scientific, prehistoric, historic or archaeological data: Where the FAA, the SHPO/THPO and any Tribe or Native Hawaiian

organization that might attach religious and cultural significance to the affected property agree that the property is of value solely for its scientific, prehistoric, historic or archaeological data, the FAA may comply with the Archeological and Historic Preservation Act instead of the procedures under Section 106.

(3) Discovery after project approval or after construction has begun on an approved project. If the FAA has approved the undertaking and construction has begun and then discovers historic properties or unanticipated effects on the historic properties, the FAA must determine what actions can be taken to resolve any adverse effects. The FAA must also notify the SHPO/THPO and any Tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property, and the Council (ACHP) within 48 hours of the discovery. The notification should describe the actions proposed by the FAA to resolve the adverse effects. The SHPO/THPO and the Tribe or Native Hawaiian organization and the Council shall respond within 48 hours of notification and the FAA shall take into account their recommendations and carry out appropriate actions. The FAA shall provide a report of the actions when they are completed.

11.5c. Eligibility of post-review discoveries. Following consultation with the SHPO/THPO, the FAA may assume, for the purposes of Section 106 consultations, that the newly discovered properties are eligible for the National Register. The FAA shall list the National Register Criteria used to assume the property's eligibility so that that information can be used to determine if there are adverse effects.

11.5d. Post-review discoveries on Tribal Lands. The FAA shall comply with applicable Tribal regulations and procedures and obtain the concurrence of the Tribe on the proposed action if there is no process for addressing such post-review discoveries and:

(1) FAA discovers historic properties on Tribal lands; or

(2) There are unanticipated effects on historic properties found on Tribal lands, after the FAA has completed Section 106 consultations and construction has commenced.

11.6 PROGRAMMATIC AGREEMENTS.

11.6a. The FAA and ACHP may negotiate a programmatic agreement (PA) in a number of situations, but some of the most common are:

(1) when FAA will govern implementation of a particular program or the resolution of adverse effects from certain complex project situations or repetitive undertakings such as the decommissioning of a particular type of building;

(2) when an undertaking is complex, wide in scope, and the effects are not known precisely;

(3) where non-federal parties are delegated major decisionmaking responsibilities;

(4) where routine management activities are undertaken at Federal installations, facilities, or other land-management units; or

(5) where circumstances warrant departure from the normal Section 106 procedures.

11.6b. The FAA may negotiate a PA with the ACHP. A PA may also be negotiated with the ACHP and the National Conference of State Historic Preservation Officers (NCSHPO) if the undertaking will be repeated in several different States. The FAA may work through the National Association of Tribal Historic Preservation Officers (NATHPO) to facilitate coordination with Tribes.

11.6c. Typically, the FAA must be able to describe the undertaking, including the timeframe and whether the undertaking will be staged. For example, as studies are completed, the APE and the types of expected adverse effects as well as the potential for mitigation must be identified before the ACHP will agree to the PA. For more information see 36 CFR 800.14 and the ACHP's "Preparing Agreement Documents."

11.6d. Compliance with the procedures established by an approved Programmatic Agreement satisfies the FAA's Section 106 responsibilities for all individual projects of the program covered by the agreement until it expires or is terminated by one of the parties to the PA. If the ACHP determines that the terms of the PA are not being carried out, or that the agreement has been terminated, the FAA shall comply with the Section 106 consultation requirements with regard to the individual projects of the program covered by the agreement.

SECTION 12. LIGHT EMISSIONS AND VISUAL IMPACTS

Statute	Regulation	Oversight Agency
There are no special purpose laws for light impacts and visual impacts.		

12.1 REQUIREMENTS.

12.1a. A description of potential impacts due to light emissions or visual impacts associated with a Federal action may be necessary. Consideration should be given to impacts on people and properties covered by section 303 (formerly, 4(f)) of the DOT Act, using guidance in section 6 of this appendix to determine section 4(f) use and significant impact.

12.1b. Permits/Certificates**:** Not Applicable.

12.2 FAA RESPONSIBILITIES.

12.2a. Light Emissions. The responsible FAA official considers the extent to which any lighting associated with an action will create an annoyance among people in the vicinity or interfere with their normal activities. Because of the relatively low levels of light intensity compared to background levels associated with most air navigation facilities (NAVAIDS) and other airport development actions, light emissions impacts are unlikely to have an adverse impact on human activity or the use or characteristics of the protected properties. Information will be included in the environmental document whenever the potential for annoyance exists, such as site location of lights or light systems, pertinent characteristics of the particular system and its use, and measures to lessen any annoyance, such as shielding or angular adjustments.

12.2b. Visual Impacts. Visual, or aesthetic, impacts are inherently more difficult to define because of the subjectivity involved. Aesthetic impacts deal more broadly with the extent that the development contrasts with the existing environment and whether the jurisdictional agency considers this contrast objectionable. Public involvement and consultation with appropriate Federal, State, and local agencies and tribes may help determine the extent of these impacts. The visual sight of aircraft, aircraft contrails, or aircraft lights at night, particularly at a distance that is not normally intrusive, should not be assumed to constitute an adverse impact. The art and science of analyzing visual impacts is continuously improving and the responsible FAA official should consider, based on scoping or other public involvement, the degree to which available tools should be used to more objectively analyze subjective responses to proposed visual changes.

12.3 ANALYSIS OF SIGNIFICANT IMPACTS. When an action is determined to have significant light or visual-related impacts pursuant to NEPA, use the following applicable instructions:

12.3a. Light Emissions. The EIS description of potential annoyance from airport lighting and measures to minimize the effects should be documented in a similar fashion in an EIS to that in an EA. Further consideration may concentrate on previously unconsidered mitigation measures and alternatives. It is possible that the responsible FAA official will judge that a special lighting study is warranted.

12.3b. Visual Impacts. The impact discussion will normally include appropriate presentation of the application of design, art, architecture and landscape architecture in mitigating adverse visual and other impacts and encouraging enhancement of the environment.

SECTION 13. NATURAL RESOURCES AND ENERGY SUPPLY

Statute	Regulation	Oversight Agency
There are no special purpose laws for natural resources and energy supply.		

13.1 REQUIREMENTS.

13.1a. Executive Order 13123, Greening the Government Through Efficient Energy Management (64 FR 30851, June 8, 1999), encourages each Federal agency to expand the use of renewable energy within its facilities and in its activities. E.O. 13123 also requires each Federal agency to reduce petroleum use, total energy use and associated air emissions, and water consumption in its facilities.

13.1b. It is also the policy of the FAA, consistent with NEPA and the CEQ regulations, to encourage the development of facilities that exemplify the highest standards of design including principles of sustainability. All elements of the transportation system should be designed with a view to their aesthetic impact, conservation of resources such as energy, pollution prevention, harmonization with the community environment, and sensitivity to the concerns of the traveling public. This is in keeping with section 102(2)(A) of NEPA, which requires all agencies to "...utilize a systematic interdisciplinary approach, which will ensure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking...."

13.1c. Permits/Certificates: Not Applicable.

13.2 FAA RESPONSIBILITIES.

13.2a. Principles of environmental design and sustainability, including pollution prevention, waste minimization, and resource conservation should be followed generally in project or program planning. For purposes of the EA or EIS, the proposed action will be examined to identify any proposed major changes in stationary facilities or the movement of aircraft and ground vehicles that would have a measurable effect on local supplies of energy or natural resources. If there are major changes, power companies or other suppliers of energy will be contacted to determine if projected demands can be met by existing or planned source facilities. The use of natural resources other than for fuel need be examined only if the action involves a need for unusual materials or those in short supply. For example, if a large volume of water will be required, the availability of a supply of water from existing or planned water facilities or from surface or groundwater sources should be considered. Therefore, evaluation of significant energy, water, and other resource use for major construction actions is important.

13.2b. For most actions, changes in energy demands or other natural resource consumption will not result in significant impacts. If an EA identifies problems such as demands exceeding

supplies, additional analysis may be required in an EIS. Otherwise, it may be assumed that impacts are not significant.

13.3 ANALYSIS OF SIGNIFICANT IMPACTS. Analysis in an EIS includes detail needed to fully explain the degree of the problem and measures to be taken to minimize the impact. Measures such as more efficient airfield design, ground access improvements, or energy and resource efficient building design will be considered and described where applicable and incorporated in the action to the extent possible. The Department of Energy (DOE) may be a cooperating agency and be of assistance in determining additional specific analysis needed for energy use and in judging the seriousness of impacts.

SECTION 14. NOISE

Statute	Regulation	Oversight Agency
49 U.S.C. 47501-47507 (Aviation Safety and Noise Abatement Act of 1979, as amended) 49 U.S.C. 40101 et seq., as amended by PL 103-305 (Aug. 23, 1994) (The Federal Aviation Act of 1958) The Control and Abatement of Aircraft Noise and Sonic Boom Act of 1968 49 U.S.C. 47101 et seq., as amended by PL 103-305 (Aug. 23, 1994) (The Airport and Airway Improvement Act) 49 U.S.C. 2101 et seq. (Airport Noise and Capacity Act of 1990) 49 U.S.C. 44715 (The Noise Control Act of 1972)	14 CFR part 150 Noise Control and Compatibility Planning for Airports Advisory Circular, 150/5020 14 CFR part 161 Notice and Approval of Airport Noise and Access Restrictions	Federal Aviation Administration

14.1 REQUIREMENTS.

14.1a. For aviation noise analysis, the FAA has determined that the cumulative noise energy exposure of individuals to noise resulting from aviation activities must be established in terms of yearly day/night average sound level (DNL) as FAA's primary metric. The FAA recognizes CNEL (community noise equivalent level) as an alternative metric for California. An initial noise analysis during the environmental assessment process should be accomplished to determine whether further, more detailed analysis is necessary.

14.1b. Permits/Certificates. Not applicable.

14.2 FAA RESPONSIBILITIES.

14.2a. If significant noise impacts are expected, the FAA official must prepare a detailed noise analysis as part of an EIS in accordance with the following requirements. An EIS need not be prepared if the proposed action incorporates mitigation that reduces the noise impact below significant noise impact threshold levels.

14.2b. All detailed noise analyses must be performed using the most current version of the FAA's Integrated Noise Model (INM), Heliport Noise Model (HNM), or Noise Integrated Routing System (NIRS). Use of an equivalent methodology and computer model must receive

prior written approval from the FAA's Office of Environment and Energy (AEE). Preceedence evaluation with FAA screening methodologies, e.g., Area Equivalent Method (AEM) and Air Traffic Noise Screening (ATNS), may be appropriate. Use of equivalent screening methodologies must receive prior written approval from AEE. AEE has approved the DOD computer models MR_NMAP and MR_BOOMMAP for use and analysis of Special Use Airspace (SUA).

14.2c. All computer model input data should be collected early in the environmental process and should reasonably reflect current and forecasted conditions relative to the proposed action and alternatives. Unless it can be justified, all noise analyses must be performed using the FAA's INM, HNM, and/or NIRS standard and default data. Modification to standard or default data requires written approval from the Office of Environment and Energy (AEE). Guidance for submitting changes to the INM standard or default data can be obtained from the most current INM User's Guide. This guidance also applies for changes to standard or default NIRS data.

14.2d. Those who prepare EA's and EIS's will provide input documentation with one copy of the INM/HNM/NIRS input files used in the noise analyses and the corresponding case echo reports to the FAA official on electronic media specified by that official. If equivalent methodologies or the use of non-standard or non-default data are approved, a description of the methodology or additional, non-standard, or non-default data must be submitted along with a copy of AEE's approval.

14.3 SIGNIFICANT IMPACT THRESHOLDS. A significant noise impact would occur if analysis shows that the proposed action will cause noise sensitive areas to experience an increase in noise of DNL 1.5 dB or more at or above DNL 65 dB noise exposure when compared to the no action alternative for the same timeframe. For example, an increase from 63.5 dB to 65 dB is considered a significant impact. Special consideration needs to be given to the evaluation of the significance of noise impacts on noise sensitive areas within national parks, national wildlife refuges and historic sites, including traditional cultural properties. For example, the DNL 65 dB threshold does not adequately address the effects of noise on visitors to areas within a national park or national wildlife refuge where other noise is very low and a quiet setting is a generally recognized purpose and attribute.

14.4 ANALYSIS OF SIGNIFICANT IMPACTS.

14.4a. For proposed actions involving a single airport which result in a general overall increase in daily aircraft operations or the use of larger/noisier aircraft, as long as there are no changes in ground tracks or flight profiles, the initial analysis may be performed using the FAA's Area Equivalent Method (AEM) computer model. The time of day is also part of the equation used in the AEM method. If the AEM calculations indicate that the proposed action would result in less than a 17 percent (approximately a DNL 1 dB) increase in the DNL 65 dB contour area, it may be concluded that there would be no significant impact over noise sensitive areas and that no further noise analysis is required. If the AEM calculations indicate an increase of 17 percent or more, or if the proposed action is such that use of the AEM is not appropriate, then the proposed

action must be analyzed using the INM or HNM to determine if significant noise impacts will result.

14.4b. The determination of significance must be obtained through the use of INM, HNM, or NIRS noise contours and/or grid point analysis along with local land use information and general guidance contained in Appendix A of 14 CFR part 150. Special consideration may need to be given to whether Part 150 land use compatibility categories need adjustment when evaluating the noise impact on properties of unique significance such as national parks, national wildlife refuges, and Tribal sacred sites. For example, Part 150 guidelines are not sufficient to address the effects of noise on some national parks or some parts of national parks. Part 150 land use guidelines are not applicable to determining impacts on wildlife. When instances arise in which aircraft noise is a concern with respect to wildlife impacts, available studies dealing with specific species should be reviewed and used in the analysis.

14.4c. In accordance with the 1992 FICON (Federal Interagency Committee on Noise) recommendations, examination of noise levels between DNL 65 and 60 dB should be done if determined to be appropriate after application of the FICON screening procedure (FICON p.3-5). If screening shows that noise sensitive areas at or above DNL 65 dB will have an increase of DNL 1.5 dB or more, further analysis should be conducted to identify noise-sensitive areas between DNL 60-65 dB having an increase of DNL 3 dB or more due to the proposed action. The potential for mitigating noise in those areas should be considered, including consideration of the same range of mitigation options available at DNL 65 dB and higher and eligibility for federal funding. This is not to be interpreted as a commitment to fund or otherwise implement mitigation measures in any particular area. (FICON p. 3-7).

14.4d. The INM or HNM will be used to produce the following information:

(1) Noise exposure contours at the DNL 75 dB, DNL 70 dB, and DNL 65 dB levels. Additional contours are optional and considered on a case-by-case basis.

(2) Analysis within the proposed alternative DNL 65 dB contour to identify noise sensitive areas where noise will increase by DNL 1.5 dB. Increases of 1.5 dB that introduce new noise sensitive areas to exposure levels of 65 dB or more are included in this analysis.

(3) Analysis within the DNL 60-65 dB contours to identify noise sensitive areas where noise will increase by DNL 3 dB, only when DNL 1.5 dB increases are documented within the DNL 65 dB contour.

14.4e. The noise analysis will be conducted to reflect current conditions and forecast conditions for all reasonable alternatives, including the preferred and no action alternatives. This analysis should include maps and other means to depict land uses within the noise impact area. The addition of flight tracks is helpful in illustrating where the aircraft normally fly. Illustrations shall be large enough and clear enough to be readily understood.

14.4f. Noise monitoring data may be included in an EA or EIS at the discretion of the responsible FAA official. Noise monitoring is not required and should not be used to calibrate the noise model.

14.4g. DNL contours, grid point, and/or change-of-exposure analysis will be prepared for the following:

(1) Current conditions; and

(2) Future conditions both with and without (no action) the proposal and each reasonable alternative. Comparisons should be done for appropriate timeframes. Timeframes usually selected are the year of anticipated project implementation and 5 to 10 years after implementation. Additional timeframes may be desirable for particular projects.

14.4h. If the above comparisons show a DNL 1.5 dB or greater increase over a noise sensitive area exposed to DNL 65 dB or greater as a result of the proposed project or any of its reasonable alternatives (except no action), a level of significant noise impact has been reached.

14.4i. The following information will be disclosed in the EIS for each modeling scenario that is analyzed:

(1) The number of people living or residences within each noise contour at or above DNL 65 dB, including the net increase or decrease in the number of people or residences exposed to that level of noise. (Use of maps that depict locations within a community of noise sensitive areas is recommended.)

(2) The location and number of noise sensitive uses (e.g., schools, churches, hospitals, parks, recreation areas) exposed to DNL 65 dB or greater.

(3) Mitigation measures in effect or proposed and their relationship to the proposal.

14.4j. When a proposed FAA action would result in a significant noise increase and is highly controversial on this basis, the EIS should include information on the human response to noise that is appropriate for the proposal under analysis. Inclusion of data on background or ambient noise may be helpful.

14.5 SUPPLEMENTAL NOISE ANALYSIS.

14.5a. The Federal Interagency Committee on Noise (FICON) report, "Federal Agency Review of Selected Airport Noise Analysis Issues," dated August 1992, concluded that the Day-Night Average Sound Level (DNL) is the recommended metric and should continue to be used as the primary metric for aircraft noise exposure. However, DNL analysis may optionally be supplemented on a case-by-case basis to characterize specific noise effects. Because of the diversity of situations, the variety of supplemental metrics available, and the limitations of

individual supplemental metrics, the FICON report concluded that the use of supplemental metrics to analyze noise should remain at the discretion of individual agencies.

14.5b. Supplemental noise analyses are most often used to describe aircraft noise impacts for specific noise-sensitive locations or situations and to assist in the public's understanding of the noise impact. Accordingly, the description should be tailored to enhance understanding of the pertinent facts surrounding the changes. The FAA's selection of supplemental analyses will depend upon the circumstances of each particular case. In some cases, this may be accomplished with a more complete narrative description of the noise events contributing to the DNL contours with additional tables, charts, maps, or metrics. In other cases, supplemental analyses may include the use of metrics other than DNL. Use of supplemental metrics selected should fit the circumstances. There is no single supplemental methodology that is preferable for all situations and these metrics often do not reflect the magnitude, duration, or frequency of the noise events under study.

14.5c. Supplemental analyses may be accomplished using the various capabilities of INM or NIRS for specific grid point analysis. Noise analyses can be used in combination with geographic information system (GIS) design programs such as AutoCAD and the U.S. Census TIGER databases to determine various population impacts within specified areas.

14.5d. For proposed air traffic or special use airspace actions above 3,000 feet above ground level (AGL), the ATNS shall be used. The ATNS allows the user to evaluate potential noise impacts resulting from changes in airport arrivals and departures by screening proposed changes to determine whether the change increases the community noise level by 5 decibels or more beneath the aircraft route. Where a proposed change would cause an increase in noise of 5 decibels or greater, FAA considers whether there are extraordinary circumstances that warrant preparation of an environmental assessment.

14.5e. For air traffic airspace actions where the study area is larger than the immediate vicinity of an airport, incorporates more than one airport, or includes actions above 3,000 feet AGL, noise modeling will be conducted using NIRS. For those types of studies, NIRS will be used to determine noise impacts from the ground to 10,000 feet AGL. This noise analysis will focus on the change in noise levels as compared to populations and demographic information at population points throughout the study area. Noise contours will not be prepared for the NIRS analysis. However, NIRS will be used to produce change-of-exposure tables and maps at population centroids using the following criteria:

DNL 60-65 dB	± 3 dB
DNL 45-60 dB	± 5 dB

14.5f. The following metrics have been used in developing supplemental noise analyses for a variety of reasons such as sleep disturbance, speech interference, soundproofing, and analysis for special areas such as national parks:

(1) SEL (sound exposure level) - A single event metric that takes into account both the noise level and duration of the event and referenced to a standard duration of one second.

(2) L_{max} (maximum sound level) - A single event metric that is the highest A-weighted sound level measured during an event.

(3) L_{eq} (equivalent sound level) - A cumulative level of a steady tone that provides an equivalent amount of sound energy for any specific period.

(4) TA (time above) - A time-based metric that gives the duration, in minutes, for which aircraft-related noise exceeded a specified A-weighted sound level during a given period.

(5) SPL (sound pressure level) - One-third octave band sound pressure levels that form the starting point for all other noise metrics. SPL provides a detailed description of the frequency components of a single complex sound and are used in assessing the effectiveness of soundproofing.

(6) Audibility - A time-based metric developed for use in Grand Canyon National Park to evaluate the substantial restoration of natural quiet as mandated by Public Law 100-91.

14.5g. The type and nature of activity potentially impacted should be considered. The FICON report identified sleep disturbance and speech interference as two areas where it is appropriate to consider supplemental metrics. In the case of sleep disturbance, the report referred the reader to a dose-response relationship developed by the US Air Force Armstrong Laboratories. This relationship relates SEL to a percent-awakened number. No provision is made for combining the effects of multiple events. To examine speech interference, FICON recommends using a cumulative A-weighted metric that is limited to the affected time period hours or a Time-above analysis. Additionally, FICON provides a table that relates DNL to speech interference. The guidelines for both sleep interference and communication interference relate the degree of interference to single event indoor noise levels. Refer to FICON for further guidance. In addition, the FAA will consider use of appropriate supplemental noise analysis in consultation with the officials having jurisdiction for national parks, national wildlife refuges, and historic sites including traditional cultural properties where a quiet setting is a generally recognized purpose and attribute that FAA identifies within the study area of a proposed action. Such supplemental noise analysis is not, by itself, a measure of adverse aircraft noise or significant aircraft noise impact. Offices within FAA must consult with and receive approval from AEE in determining the appropriate supplemental noise analysis for use in such cases.

14.6 PROJECTS NOT REQUIRING A NOISE ANALYSIS.

14.6a. No noise analysis is needed for proposals involving Design Group I and II airplanes (wingspan less than 79 feet) in Approach Categories A through D (landing speed less than 166 knots) operating at airports whose forecast operations in the period covered by the EA do not exceed 90,000 annual propeller operations (247 average daily operations) or 700 jet operations (2 average daily operations). These numbers of general aviation (GA) propeller and jet

operations result in DNL 60 dB contours of less than 1.1 square miles that extend no more than 12,500 feet from start of takeoff roll. The DNL 65 dB contour areas would be 0.5 (one-half) square mile or less and extend no more than 10,000 feet from start of takeoff roll. Note that the Cessna Citation 500 and any other jet aircraft producing levels less than the propeller aircraft under study may be counted as propeller aircraft rather than jet aircraft.

14.6b. No noise analysis is needed for proposals involving existing heliports or airports whose forecast helicopter operations in the period covered by the EA do not exceed 10 annual daily average operations with hover times not exceeding 2 minutes. These numbers of helicopter operations result in DNL 60 dB contours of less than 0.10 (one-tenth) square mile that extend no more than 1,000 feet from the pad. Note that this rule applies to the Sikorsky S-70 with a maximum gross takeoff weight of 20,224 pounds and any other helicopter weighing less or producing equal or less levels.

14.7 PART 150 NOISE PROPOSALS. If the proposal requiring an EA or EIS is the result of a recommended noise mitigation measure included in an FAA-approved 14 CFR part 150 noise compatibility program, the noise analysis developed in the program will normally be incorporated in the EA or EIS. The FAA responsible official must determine whether this is sufficient for EA or EIS noise analysis purposes.

14.8 FACILITY AND EQUIPMENT NOISE EMISSIONS. The provisions of the Noise Control Act of 1972 (NCA) (P.L. 92-574), as amended, apply. FAA may use State and local standards as a guide for particular activities if these standards are at least as stringent as Federal standards. The NCA provisions apply to all land uses. FAA should give special attention to noise sensitive sites in developing mitigation (e.g., scheduling machinery operations near hospitals).

14.9 FLIGHT STANDARDS

14.9a. Flight Standards actions that are subject to environmental procedures and assessments include the issuance of an air carrier operating certificate, an operating certificate, the approval of operations specifications or amendments thereto that may significantly change the character of the operational environment of an airport. The person responsible for issuing the certificate or approving the operations specifications is also responsible for assuring the assessment is prepared. Thorough coordination among Flight Standards District Office personnel, the Regional Flight Standards Division and the Regional Noise Abatement Officer is essential. Coordination among regions is expected if an action crosses regional boundaries.

14.9b. In preparing a noise analysis for an assessment, the Flight Standards District Office personnel normally will collect information from the operator that includes airports, types of aircraft and engines, number of scheduled operations per day, and the number of day/night operations. The information should also include the operator's long range plans and operation assumptions that are sufficiently conservative to encompass reasonably foreseeable changes in operations.

14.9c. If the carrier declines to furnish the information, or if the furnished information on operations at the airport does not realistically address night operations (in view of the carrier's proposal and pattern of activity at that airport), or if the information otherwise patently understates the potential operations (when compared with carrier's operations at other airports or with other carrier's operations at that airport), the responsible Federal official will develop an operational assumption which includes night operations and which is otherwise consistent with the typical operations of similar carriers at similar airports. This operational assumption will be used in the environmental assessment after coordination with the affected air carrier. If the air carrier objects to the use of this operational assumption in the assessment, the carrier may specify that a lesser level of operations be used in the assessment, provided that the carrier agrees that this lesser level will serve as a limit on the operations specifications. If the carrier refuses such a limitation, the FAA will include all reasonably foreseeable operations in the assessment. In this situation the assessment shall state the operational assumption was developed solely for the purpose of environmental analyses and that it is not to be viewed as a service commitment by the carrier.

14.9d. If an EIS is required, the affected operator should be advised as soon as possible and should be requested for any additional required information. District Office personnel will coordinate, as necessary, any activity with the operator. The certificate will not be issued or the operations specifications approved until all issues and questions associated with the EIS are fully resolved and the regional Flight Standards Division manager has concurred with the issuance or approval.

SECTION 15. SECONDARY (INDUCED) IMPACTS

Statute	Regulation	Oversight Agency
See requirements below		

Major development proposals often involve the potential for induced or secondary impacts on surrounding communities. When such potential exists, the EA shall describe in general terms such factors. Examples include: shifts in patterns of population movement and growth; public service demands; and changes in business and economic activity to the extent influenced by the airport development. Induced impacts will normally not be significant except where there are also significant impacts in other categories, especially noise, land use, or direct social impacts. In such circumstances, an EIS may be needed.

SECTION 16. SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

Statute	Regulation	Oversight Agency
Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (59 FR 7629, February 16, 1994).	Order DOT 5610.2, Environmental Justice in Minority and Low-Income Populations, April 15, 1997 CEQ Environmental Justice: Guidance Under the National Environmental Policy Act, December 10, 1997 Final Guidance For Consideration of Environmental Justice in Clean Air Act 309 Reviews, July 1999.	Department of Transportation Council on Environmental Quality Environmental Protection Agency
Executive Order13045, Protection of Children from Environmental Health Risks and Safety Risks (62 CFR 19883, April 23, 1997).	40 CFR 1508.27	
Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 [42 U.S.C. 4601] [PL 91-528 amended by the Surface Transportation and Uniform Relocation Act Amendments of 1987, PL 100-117]	FAA Advisory Circular 150/5100-17 49 CFR part 24 FAA Order 5100.37A, Land Acquisition and Relocation Assistance for Airport Projects.	Federal Aviation Administration

16.1 REQUIREMENTS.

16.1a. Environmental Justice. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and the accompanying Presidential Memorandum, and Order DOT 5610.2, Environmental Justice, require FAA to provide for meaningful public involvement by minority and low-income populations and analysis, including demographic analysis, that identifies and addresses potential impacts on these populations that may be disproportionately high and adverse. Included in this process is the disclosure of the effects on subsistence patterns of consumption of fish, vegetation, or wildlife, and effective public participation and access to this information. The Presidential Memorandum that accompanied E.O. 12898, as well as the CEQ and EPA Guidance, encourage consideration of environmental justice impacts in EA's, especially to determine whether a disproportionately high and adverse impact may occur. Environmental Justice is examined during evaluation of other impact categories, such as noise, air quality, water, hazardous

materials, and cultural resources. When performing analyses of environmental justice impacts, NEPA practitioners should be aware that the Department of Health and Human Services (HHS) poverty guidelines specified for use by DOT Order 5610.2, and the Census Bureau's poverty threshold specified for use in the CEQ and EPA environmental justice guidance, differ slightly (e.g., $12,100 and $12,674, respectively, for a family of four in 1989). An analysis of the effects on environmental justice will generally require the use of census data for establishing the demographic and socioeconomic baseline. Use of the Census Bureau's poverty threshold is consistent with the best available demographic data and is appropriate for use in environmental justice impact analysis for NEPA purposes. However, the HHS poverty guideline, which is updated every year on a nation-wide basis, may also be applicable in situations where, for example, survey data is available to identify pockets of poverty within census tracts or sectors. The responsible FAA official may choose to use whichever poverty value is deemed the most appropriate.

16.1b. Children's Environmental Health and Safety Risks. Pursuant to Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks, Federal agencies are directed, as appropriate and consistent with the agency's mission, to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. Agencies are encouraged to participate in implementation of the Order by ensuring that their policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

16.1c. Socioeconomic Impacts. If acquisition of real property or displacement of persons is involved, 49 CFR part 24 (implementing the Uniform Relocation Assistance and Real Property Acquisition Policies Act of l970), as amended must be met for Federal projects and projects involving Federal funding. Otherwise, the FAA, to the fullest extent possible, observes all local and State laws, regulations, and ordinances concerning zoning, transportation, economic development, housing, etc. when planning, assessing, or implementing the proposed action. (This requirement does not cover local zoning laws, set-back ordinances, and building codes because the Federal government is exempt from them.)

16.1d. <u>Permits/Certificates</u>. Not Applicable.

16.2 FAA RESPONSIBILITIES.

16.2a. Environmental Justice. The Presidential Memorandum that accompanied Executive Order 12898 encourages the consideration of environmental justice impacts in EA's, especially to determine whether a disproportionately high and adverse impact may occur. Although such an analysis is not required in an EA, it may be helpful in determining whether there is a potentially significant impact. To implement Executive Order 12898, the accompanying Presidential Memorandum, and Order DOT 5610.2, where there is a potentially significant impact as part of its EIS process, the FAA must provide for meaningful public involvement by minority and low-income populations. Additionally, FAA must conduct analysis, including appropriate demographic analysis of the potential effects, to identify and address potential impacts on these populations that may be disproportionately high and adverse. It should then disclose this

information to potentially affected populations for proposed actions that are likely to have a substantial effect and for CERCLA sites. The responsible FAA official should follow the procedures outlined in Order DOT 5610.2 for analyzing the potential impacts, offsetting benefits, potential alternatives, and substantial need. Additional guidance may be obtained from the CEQ publication, "Environmental Justice: Guidance Under the National Environmental Policy Act." When FAA determines that a project has significant effects pursuant to NEPA, the potential for disproportionately high and adverse effects pursuant to environmental justice must be analyzed. FAA must ensure that its NEPA process provides public involvement opportunities for disproportionately affected low income and minority populations to comply with Executive Order 12898 and DOT Order 6510.2.

(1) EIS's should discuss the significant impact that a project would cause, then identify affected populations. If an impact would affect low income or minority populations at a disproportionately higher level than it would other population segments, an environmental justice issue is likely. In such cases, the EIS should:

(A) include demographic information about the affected populations;

(B) include information about the population(s) that have an established use for the significantly affected resource, or to whom that resource is important (i.e., subsistence fishing);

(C) provide results of analysis to determine if a low income or minority population using that resource sustains more of the impact than any other population segments;

(D) identify disproportionately affected low income and minority populations;

(E) discuss alternatives that would reduce the effect on those populations; and

(F) describe possible mitigation to reduce the effect on the disproportionately affected low income and minority populations.

(2) In cases where FAA finds a significant impact, but determines that mitigation would reduce that impact below the applicable significance threshold, the EA should describe how mitigation would reduce the impact to less than significant and verify that the project would not result in disproportionately high and adverse affects on low income and minority populations.

16.2b. Children's Environmental Health and Safety Risks. FAA is encouraged to identify and assess environmental health risks and safety risks that the agency has reason to believe could disproportionately affect children. Environmental health risks and safety risks include risks to health or to safety that are attributable to products or substances that a child is likely to come in contact with or ingest, such as air, food, drinking water, recreational waters, soil, or products they might use or be exposed to. The Task Force on Environmental Health Risks and Safety Risks to Children created by the Order may develop guidance and recommendations useful for evaluating actions with the potential to disproportionately affect children.

16.2c. Socioeconomic Impacts. The responsible FAA official consults with local transportation, housing and economic development, relocation and social agency officials, and community groups regarding the social impacts of the proposed action. The principal social impacts to be considered are those associated with relocation or other community disruption, transportation, planned development, and employment. The environmental document provides estimates of the numbers and characteristics of individuals and families to be displaced, the impact on the neighborhood and housing to which relocation is likely to take place, and an indication of the ability of that neighborhood to provide adequate relocation housing for the families to be displaced. The environmental document includes a description of special relocation advisory services to be provided, if any, for the elderly, handicapped, or illiterate regarding interpretation of benefits or other assistance available.

16.3 SIGNIFICANT IMPACT THRESHOLDS.

16.3a. Environmental Justice. Disproportionately high and adverse human health or environmental effects on minority and low-income populations may represent a significant impact.

16.3b. Children's Environmental Health and Safety Risks. Disproportionate health and safety risks to children may represent a significant impact.

16.3c. Socioeconomic Impacts. Factors to be considered in determining impact in this category include, but are not limited to, the following:

(1) Extensive relocation of residents is required, but sufficient replacement housing is unavailable.

(2) Extensive relocation of community businesses, that would create severe economic hardship for the affected communities.

(3) Disruptions of local traffic patterns that substantially reduce the levels of service of the roads serving the airport and its surrounding communities.

(4) A substantial loss in community tax base.

16.4 ANALYSIS OF SIGNIFICANT IMPACTS.

16.4a. This analysis is triggered when the potential for significant impact exists, because of extensive relocation impacts, fragmentation of neighborhoods and communities, disproportionately high adverse impacts on minority or low income communities, disproportionate health and safety risks to children, or other significant community disruption. In these cases, additional analysis is needed to describe the degree of impact and to identify mitigation or alternatives that could minimize such adverse effects.

16.4b. If an insufficient supply of generally available relocation housing is indicated, a thorough analysis of efforts made to remedy the problem will be reflected in the EIS including, if necessary, provision for housing of last resort as authorized by section 206(a) of the Uniform Relocation Assistance and Real Property Acquisition Policies Act. If business relocation would cause appreciable economic hardship on the community, if significant changes in employment would result directly from the action, or if community disruption is considered substantial, the EIS will include a detailed explanation of the effects and the reasons why significant impacts cannot be avoided.

16.4c. When the EA indicates substantial induced or secondary effects directly attributable to the proposal, a detailed analysis of such effects will be included in the EIS. As pertinent and to the extent known or reasonably foreseeable, such factors as effects on regional growth and development patterns, and spin-off jobs created will be described.

SECTION 17. WATER QUALITY

Statute	Regulation	Oversight Agency
Federal Water Pollution Control Act, as amended, known as the Clean Water Act [33 U.S.C. 1251-1387] [PL 92-500, as amended by the Clean Water Floodplains and Floodways Act of 1977, 33 U.S.C. 1252, PL 95-217, and PL 100-4]; as amended by the Oil Pollution Act of 1990 (section 311 of the Clean Water Act. Safe Drinking Water Act, as amended (SDWA, also known as the Public Health Service Act) [42 U.S.C. 300f to 300j-26] [PL 104-182] Fish and Wildlife Coordination Act of 1980 [16 U.S.C. 661-666c] [PL 85-624]	40 CFR parts 110-112, 116, 117, 122, 125, 129, 130, 131,136, and 403	Environmental Protection Agency State and Tribal Water Quality Agencies

17.1 REQUIREMENTS.

17.1a. The Federal Water Pollution Control Act, as amended (commonly referred to as the Clean Water Act), provides the authority to establish water quality standards, control discharges, develop waste treatment management plans and practices, prevent or minimize the loss of wetlands, location with regard to an aquifer or sensitive ecological area such as a wetlands area, and regulate other issues concerning water quality.

17.1b. If the proposed Federal action would impound, divert, drain, control, or otherwise modify the waters of any stream or other body of water, the Fish and Wildlife Coordination Act applies, unless the project is for the impoundment of water covering an area of less than ten acres. The Fish and Wildlife Coordination Act requires the responsible FAA official to consult with the Fish and Wildlife Service (FWS) and the applicable State agency to identify means to prevent loss or damage to wildlife resources resulting from the proposal.

17.1c. If there is the potential for contamination of an aquifer designated by the Environmental Protection Agency (EPA) as a sole or principal drinking water resource for the

area, the responsible FAA official needs to consult with the EPA regional office as required by section 1424(e) of the Safe Drinking Water Act, as amended.

17.1d. Permits/Certificates:

(1) Project proponents applying for a NPDES permit from EPA or a state, or a section 404 permit from the Army Corps of Engineers or an authorized state, must obtain a water quality certificate (WQC) to comply with section 401 of the Clean Water Act. Section 401 requires issuance of a WQC as part of the permit issuance process.

(2) A National Pollutant Discharge Elimination System (NPDES) permit under section 402 of the Clean Water Act is required for point-source discharges into waters of the U.S. A section 404 permit is required to place dredged or fill material in waters of the U.S. including jurisdictional wetlands (see 33 CFR 330.4 for information on water quality certificates requirements for Nationwide permits). A section l0 permit under the Rivers and Harbors Act of l899 is required for obstruction or alteration of navigable waters.

(3) Other State and local permits pertaining to water quality also may be required.

17.2 FAA RESPONSIBILITIES. The EA includes sufficient description of a proposed action's design, mitigation measures, including best management practices developed for non-point sources under section 319 of the CWA, and construction controls to demonstrate that State or Tribal water quality standards and any Federal, Tribal, State, and local permit requirements will be met. Consultation with the Federal, Tribal, State, or local officials will be undertaken if there is the potential for contamination of an aquifer designated by the EPA as a sole or principal drinking water resource for the area pursuant to section l424(e) of the Safe Drinking Water Act, as amended. Consultation with appropriate officials is necessary to determine which permits apply. The EA reflects the results of consultation with regulating and permitting agencies and with agencies that must review permit applications, such as the FWS, the Army Corps of Engineers, and Tribal, State and local officials, which may have specific concerns. Such consultation should be started at an early stage of the EA. The responsible FAA Official must ensure that the applicable water quality certificate is issued before FAA approves the proposed action.

17.3 SIGNIFICANT IMPACT THRESHOLDS. Water quality regulations and issuance of permits will normally identify any deficiencies in the proposal with regard to water quality or any additional information necessary to make judgments on the significance of impacts. If the EA and early consultation show that there is a potential for exceeding water quality standards, identify water quality problems that cannot be avoided or satisfactorily mitigated, or indicate difficulties in obtaining required permits, an EIS may be required.

17.4 ANALYSIS OF SIGNIFICANT IMPACTS.

17.4a. When the thresholds indicate that the potential exists for significant water quality impacts, additional analysis in consultation with State or Federal agencies responsible for

protecting water quality will be necessary. These agencies may require specific information or studies.

17.4b. In the MOA between the DOT and the Department of the Army on section 404 Permit Processing, there is a provision for elevating permit applications with the Department of the Army. When an Army District Engineer proposes to deny permit or condition one that would cause substantial, unacceptable conditions to the DOT agency, the responsible FAA official shall advise the appropriate FAA program office in Washington, D.C. That office will provide whatever follow-up action may be necessary at the Washington, D.C., level to resolve the differences.

SECTION 18. WETLANDS

Statute	Regulation	Oversight Agency
Clean Water Act, section 404 [33 U.S.C. 1344] [PL 92-500, as amended by PL 95-217 and PL 100-4] Rivers and Harbors Act of 1899, section 10 Executive Order 11990, Protection of Wetlands (May 24, 1977) (42 FR 26961)	33 CFR parts 320–330 Order DOT 5660.1A, Preservation of the Nation's Wetlands	Army Corps of Engineers Coast Guard Environmental Protection Agency

18.1 REQUIREMENTS.

18.1a. Executive Order (E.O.) 11990, Order DOT 5660.1A, the Rivers and Harbors Act of 1899, and the Clean Water Act address activities in wetlands. E.O. 11990 requires Federal agencies to ensure their actions minimize the destruction, loss, or degradation of wetlands. It also assures the protection, preservation, and enhancement of the Nation's wetlands to the fullest extent practicable during the planning, construction, funding, and operation of transportation facilities and projects. Order DOT 5660.1A sets forth DOT policy that transportation facilities should be planned, constructed, and operated to assure protection and enhancement of wetlands.

18.1b. Frequently, the FAA or an airport sponsor applies for a section 404 permit for projects requiring dredge or fill activities in jurisdictional waters after the NEPA document has been approved. There are benefits, however, to developing the permit application earlier in the process. Time savings and reduced controversy may outweigh the extra effort required to address section 404 considerations as an integral part of the NEPA process. When the two processes are integrated effectively, the Corps' approval of the permit can be concurrent with or closely follow FAA's approval. The Army Corps of Engineers may adopt the FAA's final NEPA document when making a 404 permit decision, thereby avoiding the need to prepare additional NEPA documents. For further information see 33 CFR part 320, "General Regulatory Policies" (COE), 33 CFR part 325, Appendix B, "NEPA Implementation Procedures for the Regulatory Program," chapter 11 of the Federal Highway Administration guidance cites 40 CFR 80 and 230, "Regulatory Program: Applicant Information," pamphlet EP 1145-2-1, May 1985, U.S. Army Corps of Engineers; and 40 CFR 1500.2.

18.1c. On December 13, 1996, the Army Corps of Engineers published a final rule reissuing and substantially revising, the nationwide permit program (NWP) under the Clean Water Act.

18.1d. The FAA promotes wetland banking as a mitigation tool for aviation-related projects that must occur in wetlands due to aeronautical requirements (e.g., unavoidable construction of a runway in a wetland due to prevailing wind). The FAA has developed a policy supporting the use of a wetland banking mitigation strategy. Wetland mitigation banking provides a way to mitigate wetland impacts before those impacts occur. Purchasing credits from a bank does not give the purchaser title to wetlands tracts that comprise a bank, however, it does fulfill the requirements of law and is cost effective. Rather, the purchase is simply a payment to the wetland banker for wetland mitigation services that the bank provides. The purchase of credits from an approved bank can be used by a section 404 permittee to satisfy its permit-required mitigation obligations. Copies of this policy are available on the websites of the FAA's Office of Airport Planning and Programming, Community and Environmental Needs Division, APP-600 (http://www.faa.gov/arp/600home.cfm), or the Office of Environment and Energy (http://www.aee.faa.gov).

18.1e. Permits/Certificates:

(1) A section 404 permit is required to place dredged or fill material in waters of the U.S., including wetlands, and a section l0 permit under the Rivers and Harbors Act of l899 is required for obstruction or alteration of navigable waters. If a section 404 permit and a section 10 permit are required, then the section 10 permitting process is typically combined with the section 404 permitting process of the Corps of Engineers. However, if only a section 10 permit is needed, then the FAA should follow the Coast Guard's section 10 procedures.

(2) Other State and local permits pertaining to wetlands may also be required. Many Corps Districts now have joint application procedures with their respective states.

18.2 FAA RESPONSIBILITIES.

18.2a. Early review of proposed actions will be conducted with agencies with special interest in wetlands. Such agencies include State and local natural resource and wildlife agencies, the FWS, the NMFS, the Coast Guard, the Army Corps of Engineers, the Department of Agriculture Wildlife Service, and EPA, as appropriate. This review may be combined as much as possible with the State and local officials. Specific consultation is required under the Fish and Wildlife Coordination Act with the FWS and the State agency having administration over the wildlife resources.

18.2b. If the action requires an EA, but it would not affect wetlands, the EA should contain a statement to that effect. In that case, no wetland impact analysis is needed.

18.2c. If there is uncertainty about whether an area is a wetland, the local district office of the Army Corps of Engineers or a wetland delineation specialist must be contacted for a delineation determination (or the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), formerly the Soil Conservation Service (SCS) to delineate wetlands on agricultural lands). The EA includes information on the location, types, and extent

of wetland areas that might be affected by the proposed action. This information can be obtained from the FWS or State or local natural resource agencies.

18.2d. If the action would affect wetlands and there is a practicable alternative that avoids the wetland, this alternative becomes the environmentally preferred alternative, provided there are no other overriding environmental impacts. The EA should state that the original project would have affected wetlands, but selection of the practicable alternative enabled the project proponent to avoid the wetlands.

18.2e. If the action would affect wetlands and there is no practicable alternative, all practical means should be employed to minimize the wetland impacts due to runoff, construction, sedimentation, land use, or other reason. The EA or EIS must contain a description of proposed mitigations, with the understanding that a detailed mitigation plan must be developed to the satisfaction of the 404 permitting agency in consultation with those agencies having an interest in the affected wetland.

18.2f. Impacts of wetlands can be assessed by using the function and values of the wetlands area as a basis to determine significance. If wetlands functions and value are large in number and critical to the wetland's well-being, it would be appropriate to conduct further study as part of an EIS. For example, the action would substantially alter the hydrology, vegetation, or soils needed to sustain the functions and values of the affected wetland or the wetlands it supports. Conversely, if wetlands functions and values are few in number and/or not important, no significant wetland impacts would occur.

18.3 SIGNIFICANT IMPACT THRESHOLDS. A significant impact would occur when the proposed action causes <u>any</u> of the following:

18.3a. The action would adversely affect the function of a wetland to protect the quality or quantity of municipal water supplies, including sole source, potable water aquifers.

18.3b. The action would substantially alter the hydrology needed to sustain the functions and values of the affected wetland or any wetlands to which it is connected.

18.3c. The action would substantially reduce the affected wetland's ability to retain floodwaters or storm-associated runoff, thereby threatening public health, safety or welfare (this includes cultural, recreational, and scientific resources important to the public, or property).

18.3d. The action would adversely affect the maintenance of natural systems that support wildlife and fish habitat or economically-important timber, food, or fiber resources in the affected or surrounding wetlands.

18.3e. The action would promote development of secondary activities or services that would affect the resources mentioned in items (1) through (4) in this section.

18.3f. The action would be inconsistent with applicable State wetland strategies.

18.4 ANALYSIS OF SIGNIFICANT IMPACTS:

18.4a. An agency having expertise in wetland impacts or resources may indicate that the action has potential significant wetland impacts. The responsible FAA official shall consult with that agency and, as necessary, the FWS, the Corps of Engineers, EPA, or NRCS (if wetlands are on agricultural lands), and State and local natural resource or wildlife agencies to make a determination on severity of wetland impacts. If the action is on Tribal lands, then the responsible FAA official must consult with Tribal natural resource and wildlife representatives. Any of these agencies may become a cooperating agency due to their expertise or jurisdiction. Permitting agencies may also become cooperating agencies. To the extent practical, the responsible FAA official will ensure that the environmental document meets the needs of the consulted agencies as well as those of the FAA. Scoping is encouraged to meet the needs of the permitting and cooperating agencies. Detailed analysis should include the following, as applicable:

(1) Considerations specified in E.O. 11990, Protection of Wetlands.

(2) An opinion should be issued, based on the above considerations, on the action's overall effect on the survival and quality of the remaining wetlands after project implementation.

(3) Aeronautical safety, transportation objectives, economics, and other factors bearing on the problem.

(4) Further consideration of the practicability of any alternatives.

(5) Inclusion of all practicable measures to minimize harm.

(6) Pursuant to the Fish and Wildlife Coordination Act, the FAA applies the instructions contained above.

18.4b. For any action which entails new construction located in wetlands, a specific finding should be made including: (1) there is no practicable alternative to construction in the wetland, and that (2) all practicable measures to minimize harm have been included. The proposed finding should be included in the final EIS or FONSI.

18.4c. When Federally-owned wetlands or portions of wetlands are proposed for lease, easement, right-of-way or disposal to non-Federal public or private parties, the FAA shall (a) reference in the conveyance those uses that are restricted under identified Federal, State or local wetlands regulations; and (b) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law; or (c) withhold such properties from disposal.

SECTION 19. WILD AND SCENIC RIVERS

Statute	Regulation	Oversight Agency
Wild and Scenic Rivers Act of 1968 [16 U.S.C. 1271-1287] [PL 90-542 as amended by PL 96-487]	36 CFR part 297, subpart A (USDA Forest Service) Department of the Interior and Department of Agriculture, Wild and Scenic River Guidelines for Eligibility, Classification and Management of River Areas (47 FR 39454, September 7, 1982) CEQ Memorandum on Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory, August 11, 1980 (45 FR 59190, September 8, 1980)	Department of the Interior, National Park Service, Fish and Wildlife Service, and Bureau of Land Management Department of Agriculture, Forest Service Council on Environmental Quality

19.1 REQUIREMENTS.

19.1a. The Wild and Scenic Rivers Act, as amended, describes those river segments designated or eligible to be included in the Wild and Scenic Rivers System. Under section 5(d)(1), the Department of the Interior (DOI) National Park Service (NPS) River and Trail Conservation Assistance Program (RTCA) within NPS's National Center for Recreation and Conservation (NCRC) maintains a Nationwide Rivers Inventory (NRI) of river segments that appear to qualify for inclusion in the National Wild and Scenic River System but which have not been designated as a Wild and Scenic River or studied under a Congressional authorized study. Some section 5(d) rivers (i.e., those eligible for designation as Wild and Scenic Rivers) may not be included in the NRI maintained by the NPS.

19.1b. The President's 1979 Environmental Message Directive on Wild and Scenic Rivers (August 2, 1979) directs Federal agencies to avoid or mitigate adverse effects on rivers identified in the Nationwide Rivers Inventory as having potential for designation under the Wild and Scenic Rivers Act. The August 11, 1980 CEQ Memorandum on Procedures for Interagency Consultation requires Federal agencies to consult with the NPS when proposals may affect a river segment included in the Nationwide Rivers Inventory. The Nationwide Rivers Inventory is included on the Rivers and Trails Conservation Assistance Program's webpage at www.ncrc.nps.gov/programs/rtca/nri. For those rivers or river segments which are not study rivers or designated rivers, and are not included in the NRI, the responsible FAA official should

contact the Federal agencies and State or States having jurisdiction over the river to determine what the status of the river or river segment is.

19.1c. Under section 7 of the Wild and Scenic Rivers Act, the responsible FAA official must obtain a section 7 determination from the Federal agencies that administer designated or study rivers (see www.nps.gov/rivers/ for lists of designated and study rivers). The Federal agencies include the USDA Forest Service (USFS), DOI Bureau of Land Management (BLM), DOI NPS, and DOI Fish and Wildlife Service (FWS). States also administer Wild and Scenic Rivers or segments of such rivers and should also be consulted. Note that for study rivers, Congress will, in the act authorizing the study, have designated a specific agency as the lead and the responsible FAA official should initiate consultation with that agency. Designated Wild and Scenic Rivers and study rivers are listed in the NPS's Wild and Scenic Rivers Program website at www.nps.gov/rivers along the specific Federal and State agencies that have jurisdiction over each.

19.1d. Section 12 of the Act requires a Federal agency with jurisdiction over any lands which include, border upon, or are adjacent to any river included, or under study for inclusion in the Wild and Scenic Rivers System to take action necessary to protect such river in accordance with the purposes of the Act. In addition, Federal agencies are required to cooperate with the Secretary of the Interior and appropriate State agencies for the purpose of eliminating or minimizing pollution in protected Inventory rivers. All agencies shall, as part of their normal environmental review processes, consult with the DOI (National Park Service (NPS)) and other Federal and State agencies having jurisdiction prior to taking any actions which could effectively foreclose or downgrade wild, scenic, or recreational river status of rivers in the Wild and Scenic Rivers System, study rivers, river segments in the Nationwide Rivers Inventory, or rivers or river segments otherwise eligible under section 5(d) for inclusion in the Wild and Scenic Rivers System but not on the NRI or under study.

19.1e. Permits/Certificates: Not Applicable.

19.2 FAA RESPONSIBILITIES.

19.2a. As soon as it appears that the proposed action could affect: (1) a Wild and Scenic River, (2) a river or river segment under study for inclusion in the Wild and Scenic River System, (3) a Nationwide Rivers Inventory river segment, or (4) an otherwise eligible river, the responsible FAA official should identify the Federal agency having jurisdiction over the river if on Federal land or the State and contact them for verification of the status of the river or river segment and jurisdiction for further consultation. If the NPS or other Federal and State agency having jurisdiction indicates that the proposed action could affect a Wild and Scenic River, a study river, a river segment in the Nationwide Rivers Inventory, or an otherwise eligible river or river segment, the responsible FAA official should consult with the appropriate agency for guidance as to avoiding or minimizing impacts.

19.2b. For designated Wild and Scenic Rivers, rivers on the NRI, and otherwise eligible rivers, the responsible FAA official must consult with the specific Federal agency having

jurisdiction over Wild and Scenic Rivers (e.g., the state district office of the BLM and the regional offices of the USFS, NPS, and FWS).

19.2c. For study rivers, the responsible FAA official should initiate consultation with the agency designated by Congress as the lead for the study.

19.2d. For rivers on the NRI, see the CEQ Memorandum on Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory and the CEQ Memorandum on Procedures for Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory. If no river in the NRI is adversely affected or the impact is not considered severe enough to preclude inclusion of the affected river segment in the Wild and Scenic River System or downgrade its classification (e.g., from wild to recreational), no further analysis is necessary. Consultation with NPS will determine whether or not the impact on any NRI river is significant.

19.2e. For rivers or river segments that are eligible under section 5(d) but not on the NRI, the responsible FAA official should consult with the agency or agencies having jurisdiction over the river or river segment.

19.3 SIGNIFICANT IMPACTS THRESHOLD. (no specific thresholds have been developed)

19.4 ANALYSIS OF SIGNIFICANT IMPACTS.

19.4a. Under the CEQ Memorandum on Procedures for Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory, when consultation with DOI leads to a determination that the effects on a NRI river segment are significant, or would preclude inclusion in the Wild and Scenic River System or downgrade its classification, the FAA should invite the NPS and any affected land management agencies to be cooperating agencies. If the NPS does not respond to such request for assistance within 30 days, then the FAA may proceed as otherwise planned, taking care to avoid or minimize adverse effects on the National Inventory river. For projects requiring EIS's, the record of decision must adopt appropriate avoidance and mitigation measures and a monitoring and enforcement program.

19.4b. The process is significantly impacted when an agency with the jurisdiction over a designated or eligible river segment does not issue a consent determination for the proposed action as required by section 7 of the Wild and Scenic Rivers Act and the impact cannot be mitigated to acceptable levels. If the circumstances exist, the FAA cannot proceed with the proposed action.

19.4c. For eligible wild, scenic, and recreational river areas not included in the NRI, the responsible FAA official should consider the potential effects on the river area.

19.4d. For Wild and Scenic Rivers, study rivers, NRI rivers under section 5(d)(1), and otherwise eligible rivers or river segments under section 5(d), the responsible FAA official must

obtain a section 7 determination that the proposed action will not have a direct and adverse effect on the values for which the river was or might be established or otherwise invade the river area, or for designated rivers, unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area on October 2, 1968.